

# THE AUTOMOBILE

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NEW YORK — SATURDAY, SEPTEMBER 19, 1903 — CHICAGO

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## Good Sport at New York State Fair.

The Largest Crowd of Spectators that Has Attended Any Meet of the Season, Enjoys a Day of Fast Racing, with No Accidents, at Syracuse.

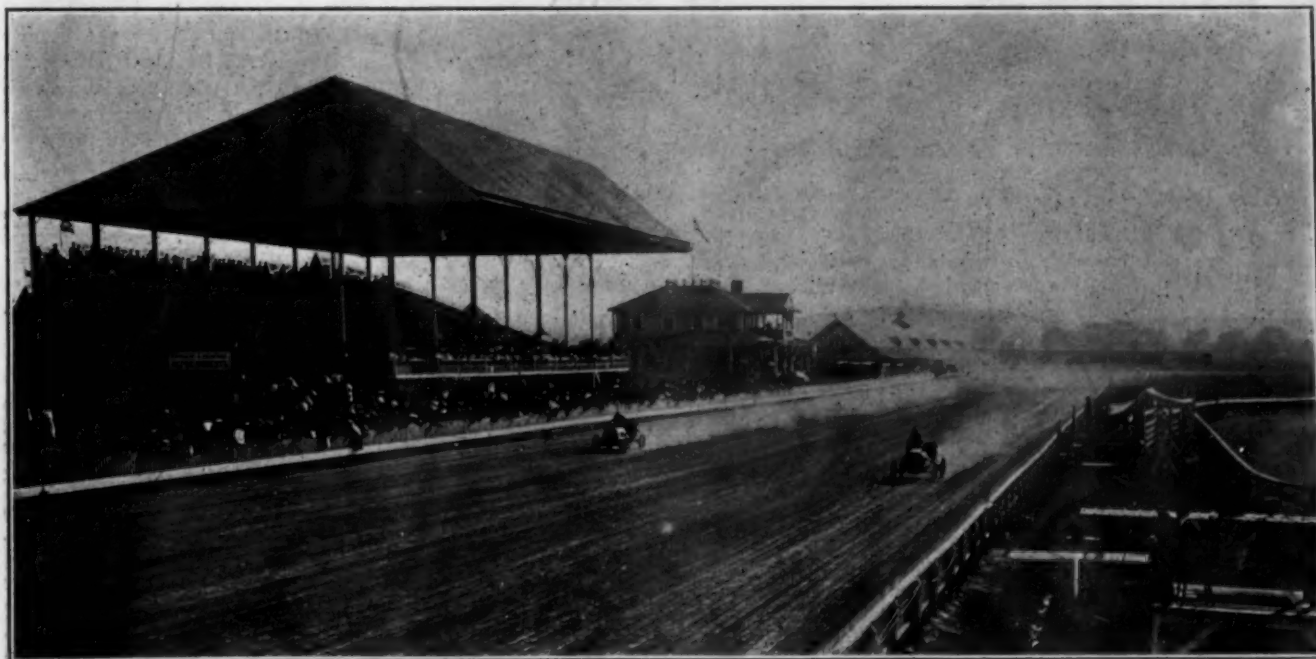
**S**YRACUSE, Sept. 14.—The first automobile race meet ever held in Syracuse and central New York closed the great New York State Fair last Saturday when more than 7,000 spectators crowded the grandstands and enclosure at the big mile track and for three hours watched the racing machines with breathless interest.

Beginning Friday afternoon parties of automobilists from all over the State

and the whole procession wound like a trail of fire through the city. The automobile clubs of Utica, Buffalo, Rochester, Auburn, Albany, Long Island and Syracuse were represented in the parade, which was arranged partly to attract attention to the races of Saturday.

The sport-loving populace flocked to the track Saturday afternoon, and there were forty cars in the enclosure with their gay parties aboard when Starter A. J. Picard fired

Despite the absence of Barney Oldfield and Henri Paige with their big cars, the races were exciting and one world's record went by the board. Dan Wurgis, of Detroit, Mich., with his Olds "Pirate," covered five miles in 5:49, establishing a new record for that distance for cars weighing less than 1,200 pounds. John Wilkinson, of Syracuse, with the Franklin 10-horse-power racer, former holder of the record broken, was only ten seconds behind.



JULES SINCHOLLE AND F. A. LA ROCHE IN FIVE-MILE MATCH AT SYRACUSE.—WON BY SINCHOLLE.

"honked-honked" their way through the crowded streets to the headquarters of the Automobile Club of Syracuse.

Friday night there was an automobile parade with more than sixty machines in the line which moved through the principal streets. From each car flamed red fire,

the pistol shot which started the first event.

The crowd soon became excited as it watched the curious machines, driven by men who apparently took their lives in their hands as they whirled around the track, taking the turns with no slackening of their speed.

Owing to the injury of the Decauville at Detroit earlier in the week, the special match-race for foreign cars arranged for the occasion had only two starters, Jules Sincholle, of Paris, and F. A. LaRoche, of New York, each of whom drove a 40-horse-power Darracq car of the Paris-Madrid

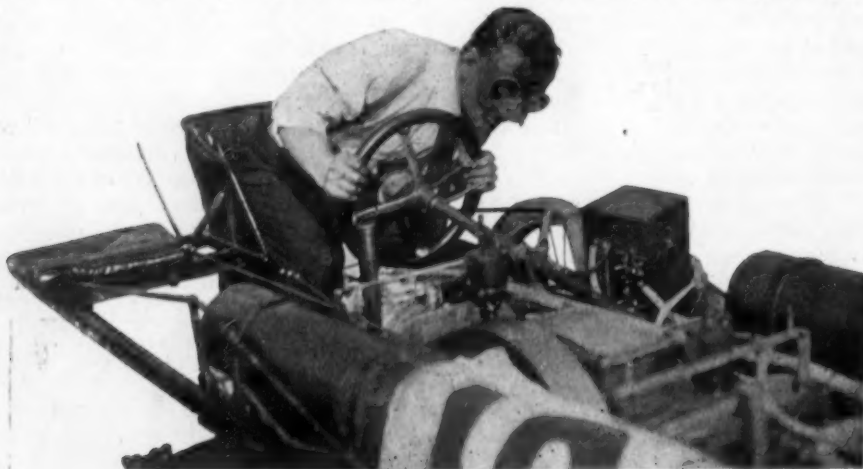
type. Sincholle won the \$175 silver cup hung up for the event. The match was a five-mile event in heats, the Frenchman winning the first and third in 5:15 2-5 and 5:22 1-5, respectively.

The first event on the program was for motor cycles of stock pattern. G. H. Curtiss, of Hammondsport, N. Y., took the pole and turned off the first mile in 1:21. Then something happened to the mechanism of his machine and A. S. Noonan, of Rome, N. Y., passed him on the backstretch and won the event in 2:45 1-2.

#### THE WURGIS-WILKINSON RACE.

The five-mile race for cars weighing less than 1,200 pounds with supplies brought two starters to the track, Wurgis with the "Pirate" and Wilkinson with the Franklin racer. A hard contest ensued.

Wilkinson had the pole on the flying start but with a burst of speed, Wurgis sped ahead and took the inside. For nearly a mile the cars flew along wheel and wheel, then the "Pirate" began to draw away.



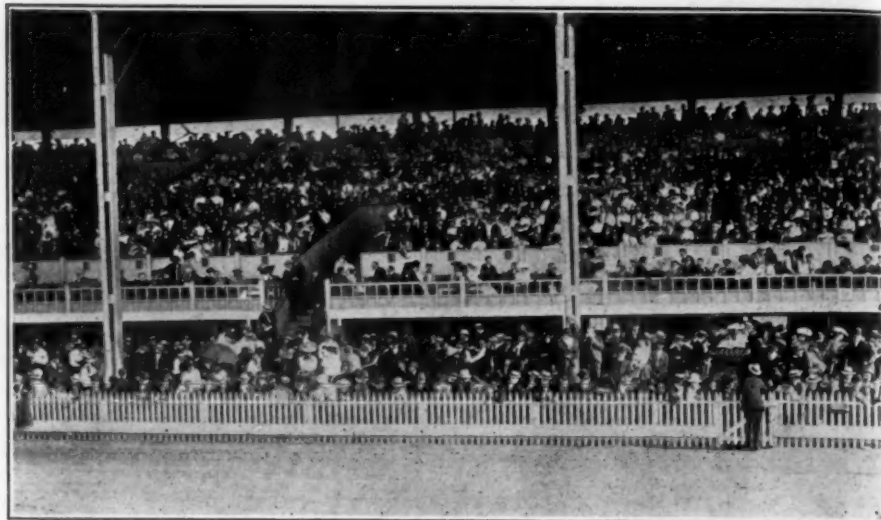
DAN WURGIS IN OLDS "PIRATE."—Holder Five-mile Record of 5:49.

Wilkinson stuck as close as he could but at the finish was about an eighth of a mile in the rear of the speedy Western flyer. It was in this event that Wurgis established the new record.

The third event was one which proved again that a race is never won until it is finished. H. H. Mundy, secretary of the Automobile Club of Utica, with a big 1903 Winton, and Albert E. Petrie, with a 1902 Winton, were the starters in the race for Winton touring cars of regular stock models. Mr. Mundy took the lead at the start and maintained it well into the fourth mile, when his bearing began to heat and forced him to slow up. Petrie passed him at the three-eighth pole on the last mile and won the race easily in 9:55. Smoke from the bearings continued to rise but Mr. Mundy did not stop his car until he finished the last mile.

#### SYRACUSE CLUB HANDICAP.

One of the best races of the day was the five-mile handicap for members of the Automobile Club of Syracuse, which



A SECTION OF ONE OF THE CROWDED GRANDSTANDS AT SYRACUSE.

brought out seven starters, their names and handicaps being as follows: John Wilkinson, (scratch); C. A. Benjamin, A. E.

contestants drove 10-horsepower Franklins except Petrie, who drove a 1902 Winton touring car.

Cornwall, early in the race established a lead which it required 3 1-2 miles for Wilkinson to overcome from scratch. He succeeded, however, and won the race handily from Cornwall, finishing in 8:23 1-2, 7 1-2 seconds ahead of Cornwall.

The prettiest fight in this event was between Benjamin (Franklin) and Petrie (Winton) from the quarter-mile mark. The latter got off poorly, not seeing the flag, but he hung onto Benjamin and passed him in the stretch of the fourth mile, winning third place from Benjamin.

A big field started for the handsome silver cup offered by the H. H. Franklin Mfg. Co. to the winner of the five-mile event for its regular stock cars. R. M. Cornwall proved an easy winner in 9:02 4-5, with O. N. Hine second in 9:20 1-5.

#### FASTEST MILES OF THE DAY.

The fastest mile of the afternoon was made by Sincholle in an exhibition, with his Darracq. His time was 1:00 3-5.



GROUP OF RACING COMMITTEE MEMBERS AND TRACK OFFICIALS AT SYRACUSE.

The trials for record miles called out Wilkinson, LaRoche, and Wurgis, who in separate events were timed with flying starts. The spider-like Oldsmobile made the circuit in 1:08, which was 2 seconds slower than Wurgis's best record. The Franklin racer with Wilkinson in the seat cut its record from 1:20 2-5 to 1:11, while LaRoche with his snorting Darracq made the mile in 1:04 3-5.

Had Oldfield and Paige been here to enter the special race it would undoubtedly have been one of the greatest events of its kind held in the country this year. Their absence, however, did not prevent a good race between Sincholle and LaRoche. The event was the fastest of the afternoon. Sincholle had things all his own way in the first and third heats. LaRoche went away on the pole in the third heat but his lead was short lived, for Sincholle whizzed

cars showed themselves to be thorough sportsmen by entering the ten-mile race for cars weighing less than 2,800 pounds, against the pair of Darracqs. Wurgis got off in the lead but could not hold it, and it was Sincholle who led past the cheering stands at the end of the first mile. LaRoche soon afterward passed Wurgis, who pressed gamely on and took third place behind LaRoche. Wilkinson did not finish. Sincholle won in 10:12 2-5, and LaRoche finished second in 11:36 2-5.

The committee of the Automobile Club of Syracuse which had charge of the arrangements for the meeting was composed of Chairman C. Arthur Benjamin, F. H. Elliott, secretary of the club, and W. L. Brown, president.

The New York State Fair Association awarded the prizes, all of which were handsome sterling silver cups.

Timers—H. W. Smith, president New York State Association of Automobile Clubs, first vice-president A. C. of Syracuse; Alexander T. Brown, A. C. of Syracuse; Charles S. Averill, Syracuse Driving Club; Willis B. Burns, Syracuse Driving Club, and John A. King, Syracuse Driving Club.

Starter—A. J. Picard, New York.

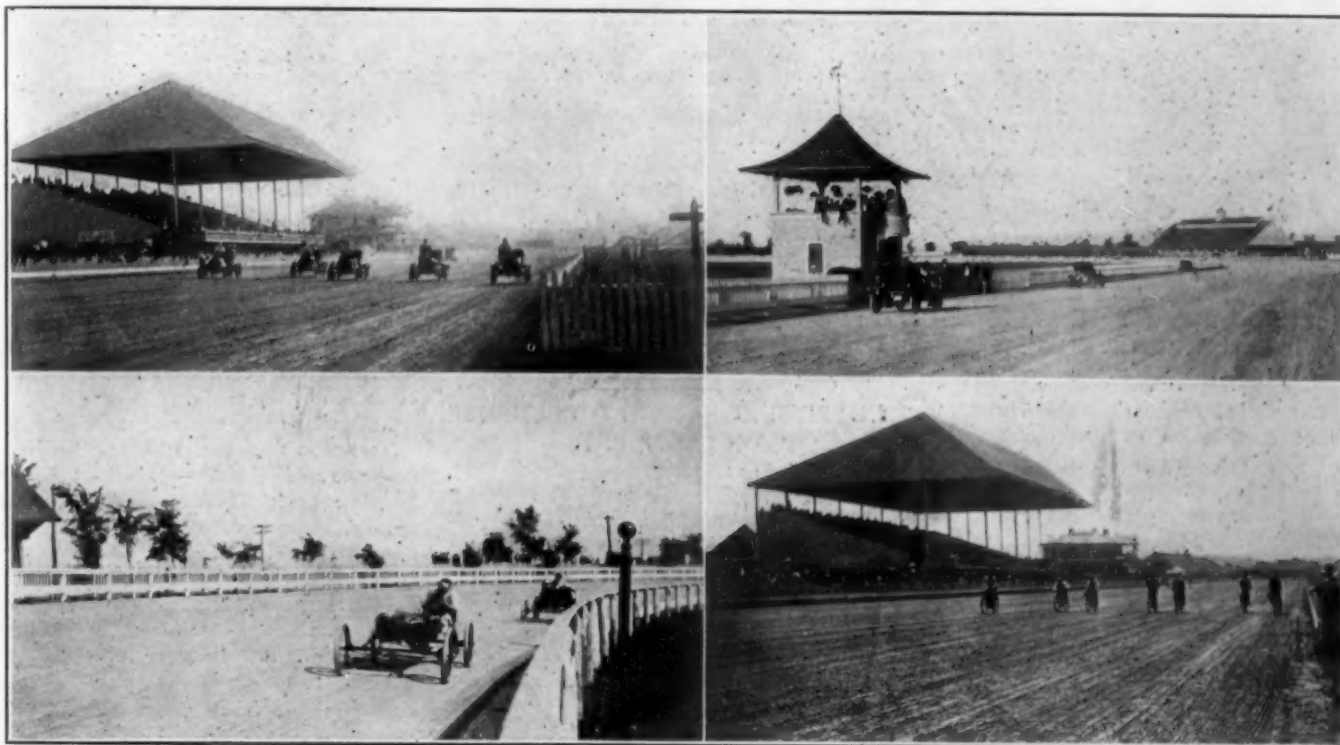
Assistant Starter—T. A. Young, A. C. of Syracuse.

Clerk of Course—F. J. Wagner, secretary Buffalo A. C.

Assistant Clerk of Course—W. A. Francher, A. C. of Syracuse.

Announcer—Peter Brunty, New York.

Ushers—Henry Walters, A. C. of Syracuse; Oscar N. Hine, A. C. of Syracuse; Forman Wilkinson, A. C. of Syracuse; Carl L. Amos, A. C. of Syracuse



Five-Mile Race for Franklin Cup, Won by R. M. Cornwall. Wurgis, in the "Pirate," Winning from Wilkinson, in the Franklin.

Judges' Stand and Stable, Five-Mile Handicap in Progress. Two-Mile Motor Bicycle Race, Won by A. S. Noonan.

#### TRACK VIEWS AND RACES AT THE SYRACUSE CLUB MEET AT THE NEW YORK STATE FAIR.

by him on the first drive down the backstretch.

The starts of the first and third heats were made with the machines in motion, that of the second heat from standing start. Sincholle took the lead at the start of the second heat but soon relinquished it to LaRoche, and at the end of the fourth mile ran off the track to change his gear.

LaRoche jumped away in the lead in the third heat, but in the backstretch Sincholle aroused the cheering of the spectators, with whom he was a favorite, by passing LaRoche and making a runaway victory of the heat.

#### THE TEN-MILE RACE.

Wurgis and Wilkinson with their small

The track was in excellent condition for the races and was pronounced by Sincholle to be the fastest he had ever ridden on. There were no accidents.

The officials of the meeting were as follows:

Referee—A. R. Pardington, chairman Racing Board of the American Automobile Association, and chairman Race Committee Long Island A. C.

Judges—William Horace Hotchkiss, president Buffalo A. C.; Lee Richmond, president Rochester A. C.; Charles M. Page, secretary Albany A. C.; Harry H. Mundy, secretary and treasurer A. C. of Utica, and George S. Larrabee, second vice-president A. C. of Syracuse.

#### THE SUMMARIES.

Two miles for motor bicycles, regular stock machines—A. S. Noonan, Rome, first; W. F. Murphy, New York, second; James B. Woodruff, Syracuse, third. Time, 2:45 1-5.

Five miles for cars under 1,200 pounds, supplies included—Dan Wurgis (Olds "Pirate"), first; John Wilkinson (Franklin), second. Time, 5:49.

Five miles for Winton touring cars, stock model with tonneau attached—A. E. Petrie, Syracuse, first; H. H. Mundy, Utica, second. Time, 9:55.

Ten miles for cars under 1,800 pounds, supplies included—Jules Sincholle, Paris, (Darracq), first; F. A. LaRoche, New York (Darracq), second; Dan Wurgis, Cleveland (Olds "Pirate"), third. Time 10:36 2-5.

Special match race between Jules Sincholle (Darracq) and F. A. LaRoche (Darracq)—five-mile heats, best two in three. Sincholle won first and third heats, LaRoche winning second heat. Time, first

heat, 5:15 2-5; second heat, 5:48 4-5; third heat, 5:14 1-5.

Five-mile handicap for members of the Automobile Club of Syracuse—John Wilkinson (Franklin) (scratch), first; R. M. Cornwell (Franklin) (5-16),

This matter will be threshed out by the committee to be appointed by President Smith, and the constitution will be submitted to the clubs for adoption. The

vented fast time being made on the motor cycles. Only one accident marred the sport, Robert Atkinson being thrown from his motor cycle owing to his front wheel



Geo. Papillon (Darracq). Oldfield (Winton). H. Paige (Deauville). J. Sincholle (Darracq). H. Cunningham (Packard).  
LINED UP FOR TEN-MILE OPEN, FIRST DAY AT DETROIT, WON BY OLDFIELD—12:19.

second; A. E. Petrie (Winton) (1-4), third. Time, 8:23 1-2.

Five miles for Franklin cars, regular stock models—R. M. Cornwell, first; Oscar N. Hine, second; Forman Wilkinson, third. Time, 9:02 4-5.

One-mile record trials—F. A. LaRoche (Darracq), first. Time, 1:04 3-5. Prize for fastest mile for car under 1 200 pounds—Dan Wurgis (Olds Pirate), first; John Wilkinson (Franklin), second. Time, 1:08.

### MEETING OF NEW YORK STATE ASSOCIATION OF CLUBS.

*Special Correspondence.*

SYRACUSE, Sept. 14.—The New York State Association of Automobile Clubs met at the Yates Hotel in this city last Saturday evening and took further steps towards forming a permanent organization to include all of the clubs of the State.

President Hurlburt W. Smith, of Syracuse, was in the chair. He was empowered to appoint a committee consisting of one member from each club in the association to draft a constitution and by-laws. This committee will report in about a month, or as soon as its labors are completed, to a meeting of the association to be held here.

It was the sentiment of the meeting that the State Association be made a division of the America Automobile Association, the relations of the state and national bodies being similar to those of the League of American Wheelmen when it was in its prime. Letters were received from prominent automobilists asking that this be done and encouraging the State Association in its work.

A difference of opinion arose as to the representation of the various clubs, the Buffalo delegates wanting representation in the State Association according to the membership of their club. It has a membership of more than 300, which would give the Buffalo club more representatives than any of the other clubs with the exception of the Automobile Club of America and the Automobile Club of Long Island.

prospects are that some agreement satisfactory to all will be reached.

For the first time since the State Association was first organized, a representative of a metropolitan club was present in the person of A. R. Pardington, of the Automobile Club of Long Island. Representatives from all of the other prominent automobile clubs of the State excepting the Automobile Club of America attended the meeting.

### INTERESTING RACES AT BALTIMORE ON LABOR DAY.

Three thousand sport-loving Baltimoreans turned out on Labor Day to see the automobile and motor cycle races on the half-mile track at Electric Park, and

slipping on one of the turns. No bones were broken, however, and the rider escaped with a few bad scratches.

In the automobile events Howard Gill won his heat and the final in the two-mile race for steamers, and also the five-mile open. Bob French carried off the honors in the motor cycle races and in an exhibition drove his 1 3-4-horsepower Indian a mile in 1:38, much the fastest time of the day, and very creditable considering the condition of the track.

Following is the summary:

Two-mile race limited to gasoline cars under 1,200 pounds—J. Henry Miller, Duryea, first; Thomas Goodwin, Fordmobile, second; Charles Vinson, Oldsmobile, third. Time, 4:21.

Two-mile motor cycle handicap—Bob French, Indian, scratch, first; James Wooden, Indian, second; C. Thomas, Indian, third. Time, 4:00 2-5.

Two-mile race for steamers—Final heat, Howard Gill, Stanley, first; B. H. Biddle, Stanley, second. Time, 4:36 2-5.



JULES SINCHOLLE IN HIS DARRACQ—Winner Four Best Races at Detroit.

they were well repaid by a good program of exciting events. The track had been well rolled and scraped, but was still a trifle soft on the backstretch, which pre-

Five-mile open for automobiles—Howard Gill, Orient Buckboard, first; O. Gooden, Stanley, second; J. Henry Miller, Duryea, third. Time, 10:13 2-5.

## FATAL ACCIDENT AT WISCONSIN FAIR.

### FIRST CASUALTY TO TRACK RACER

**Frank Day, Driving Tom Cooper's "999" Yellow Car, with Insufficient Practice on a Flat Track, Is Caught Under the Machine as it Overtakes at Milwaukee.**

*Special Correspondence.*

MILWAUKEE, Sept. 12.—"I'd just as soon ride—yes, rather—my 'Red Devil' forty times a day, than ride once in a horse race."

Frank Day, a professional motorist of California, but who for the past few years

was dying. The body was borne away a few minutes later by the coroner.

Such was the deplorable end of the Wisconsin 1903 State Fair. For weeks Milwaukeeans waited for the automobile races. The announcement that Tom Cooper and Barney Oldfield would ride attracted crowds at the fair every day. But each day the professional events were postponed because these prominent motorists did not arrive. An accident at Detroit prevented Oldfield from coming. The fair management, after some trouble, secured Frank Day and Edward Huff in their stead. They were to ride Friday, but as the management failed to give the track to the men for practice, they did not ride.

mile exhibition. He made the first half mile in 32 seconds, and the first mile in 1:04. As he passed the grandstand at the end of the second mile in 2:10, he threw away the cigar which he had been smoking. The three miles were covered in 3:15. He made good time in the fourth lap, and as he was starting to round the curve the perfect control of his car, which he had displayed, was lost, and the machine swung out closer to the fence, then dashed into it. The track had no banks at the turns.

G. D. Stuart, who manages the Cooper and Oldfield machines, believes that Day lost control of his vehicle.

Frank Day was the son of Maj. James B. Day, of Columbus, O., agent director



Tuning Up the Old Racers.  
Wrecked "Baby Bullet," Owen's Gordon Bennett Racer.

Contestants and Officials at the Wire.  
Spectators' Cars in the Grounds at Grosse Pointe.

#### SNAP SHOTS TAKEN AT TWO-DAYS RACE MEET AT GROSSE POINTE TRACK, DETROIT.

has lived in Columbus, O., made the above statement at the State Fair this afternoon. Then he mounted the yellow Ford-Cooper racing machine for a five-mile ride against time. Ten minutes later he was dead. He was killed almost instantly, just as his machine was making the turn leading into the backstretch. Instead of coming up the track, as was anticipated by the 5,000 spectators, the machine shot straight across the track and into the heavy outer fence.

A rush to the scene—400 feet from the grandstand—followed. There were many physicians among the spectators and two of them immediately attended Day, who

Several theories are advanced as to the cause of the accident. Some hold that the track—a flat one—was in poor condition, and that a wheel on the car struck a post, throwing the hapless driver to the ground. Some who examined the ground held that the right front tire, becoming loose, as the machine rounded the turn, was torn off and the disabled wheel plowed a furrow three inches deep for eight feet in the surface of the track, and then the car turned a somersault. It fell on and crushed Day, and turning over again right side up, plowed down the fence for a distance of a dozen feet.

Day was riding against time in a five-

of the New York Life Insurance Company. Day rode the race against the wishes of his parents. He had telegraphed them for permission to ride but they refused.

On Friday there was an eight-mile race at the track with four starters—Jones, of Chicago; Odenbrett, of Milwaukee, and Messrs. Erstberg and Miller, of Waukesha. Jones, in a 24-horsepower Columbia, won.

#### *Special Telegram.*

MILWAUKEE, Sept. 15.—The coroner's jury on Frank Day's death places no blame on anybody. The body has been shipped to the home of the deceased in Columbus, Ohio.

## An Automobile Army Repair Wagon.

A very interesting motor vehicle designed for the utmost utilitarian purpose has just been completed in Jersey City and is shown in the photographs reproduced herewith. It was built for the United States War Department under the supervision of Lieutenant O'Hearn, to be used as an automobile repair shop to accompany light artillery, cavalry and infantry in field service. It will be shipped to Washington in a few days for inspection and then to Leavenworth, Kan., for trial in actual service.

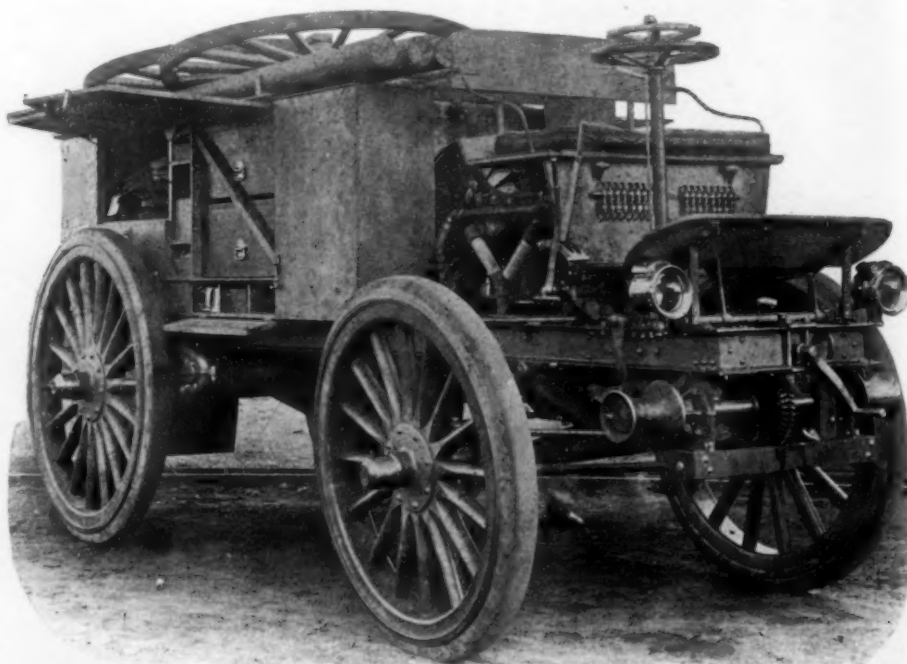
This wagon is elaborately equipped with machinery and tools and stocked with materials for repairing on the spot breakages and injuries to the field guns, the caissons and the army wagons, to re-shoe the horses and mend the harness and saddles, and to do emergency carpenter work.

The box-like body has doors on both sides and at the rear that rise on hinges, giving access to the interior. In one side there is a small lathe for turning metal. This is driven by a small, single-cylinder upright gasoline motor carried by the side member of the steel angle-iron main frame of the wagon below the lathe. In the opposite side of the wagon body are a series of drawers and compartments for the storage of tools and materials of all sorts, and in the rear there is a small blacksmith's forge and anvil. The auxiliary motor that drives the lathe also turns a grindstone and a dynamo. At the front of the wagon, suspended below the steel frame, is a double windlass that is turned

of heavy poles are carried on the "roof."

The wagon itself is 12 1-2 feet long, and, stripped of its equipment, weighs 3 1-4

is effected by means of a honeycomb radiator-tank back of the motor and a fly-wheel fan that forces the air through the radiator. The maximum speed on good roads is ten miles an hour. The gasoline tank has a capacity for a run of about 300 miles on one filling. The wheels are of



AUTOMOBILE REPAIR WAGON, BUILT FOR UNITED STATES ARMY.

tons. The equipment and supplies furnished by the War Department weigh just two tons. Motive power is furnished

artillery type, of large diameter and shod with extra heavy solid rubber tires.

This unique vehicle, which is the first of



SIDEVIEW SHOWING WAGON DRIVING MECHANISM, LATHE AND AUXILIARY MOTOR.

by the motor and by which the wagon can, if necessary, pull itself out of a hole. A pair of extra artillery wheels and a number

by a four-cylinder, 24-horsepower upright gasoline engine mounted just below and to the rear of the operator's seat. Cooling

the kind ever built, at least in this country, was made by the United States Long Distance Automobile Co., of Jersey City, N. J.

## Beautiful Scenery and Good Modern Hotels Await Tourists in Maine.

By LESTER M. HART.

PORTLAND, Me., September 12.—It may seem an exaggerated assertion to say that Maine is without doubt the best State in the Union for the automobilist, but this is none the less true, and the statement is amply substantiated by every visitor to the Pine Tree State. Those who make this section of the country their summer abiding place invariably say that no fairer district could be found.

The claim of the best State for automobilists does not rest so much on the roads—for these, it must be admitted, are not of the best,—but upon the accommodations for visitors, convenience in travelling from point to point, and above all, the scenery.

The history of automobilizing in Maine is very short, but it is nevertheless inter-

regarded in the light of a permanent fixture in the lives of Maine people.

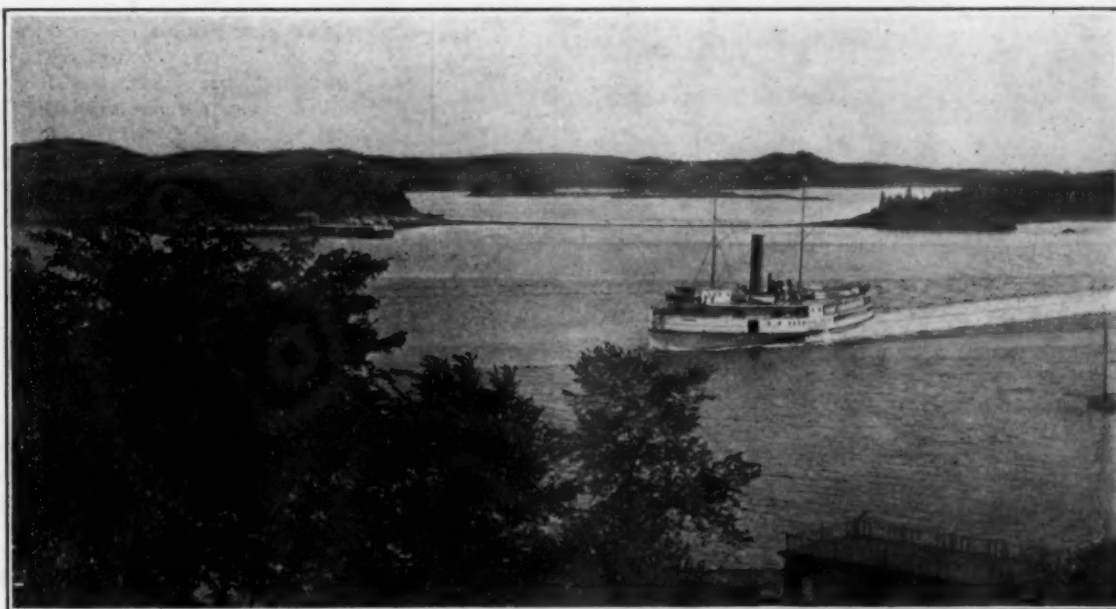
Automobiles came gradually into the State. One man of money would get a carriage and then another would follow, but always as an experiment, with no thought that they would ever become an established means of locomotion in the State. Five years ago the real life of the automobile began. A number of machines had been introduced up to that time, and people were beginning to regard them more favorably.

In 1898, though a frequent sight, the automobile was not a common one on the streets of Maine cities, and it was rarely seen in the country. At that time the real "auto" fever began to take hold of the people with a strong grip. The next

and everywhere they are receiving the favorable attention they deserve. In the State of Maine there are now about 200 privately owned automobiles, and of these seventy-five are owned in Portland alone.

As the interest in the automobile grew, it was decided to perfect some sort of an organization for those owning machines; and with this end in view, a number of enthusiasts met in the photographic studio of Maynard D. Hanson in Monument Square, Portland, in April, 1900, and organized The Automobile Club of Maine. There were twenty members at first with Mr. Hanson as the president.

In the constitution of this club it is stated that the "Club is formed for the encouragement of the automobile for pleasure purposes, to co-operate in securing rational legislation and the formation of proper rules and regulations governing the use of automobiles in city and country, to maintain the lawful rights and privileges of owners and users of all forms of self-



PENOBSCOT BAY, ONE OF THE MANY BEAUTY SPOTS ALONG THE COAST OF MAINE.

esting, from the fact that it shows with what rapidity a means of securing outdoor enjoyment will gain favor when once established as reliable among a conservative people. The people of Maine are conservative, as has been proven time and again; they will wait for the successful demonstration of an article, and not until its trustworthy qualities have been proven will they accept it. Once accepted, the object of their regard is sure of a permanent place.

It was this way with the automobile. Who had the first horseless carriage in Maine nobody knows, but it was regarded with contempt as an invention not to be depended upon, a foolish waste of money. Happily, this has all been changed, and, with few exceptions, the automobile is

year, the favor of automobiles was more marked. The summer of 1902 saw the automobile an object of no more than ordinary interest, save to enthusiasts, in the State. At the beginning of 1903, everyone who could afford a machine was inquiring the prices and best makes. Many men, whom no one would think of taking to the sport at their stage of life, secured light carriages or touring cars, and ran them with uninterrupted enthusiasm.

The non-motorists no longer look at an automobile with unknowing curiosity, but with an eye to see how well made the machine is, how it will run, its beauty and its price. The automobile as a means of public conveyance has already been started. The hotels are adopting them,

propelled pleasure vehicles in Maine and to encourage in all ways the construction and maintenance of good roads.

"The membership of the Club shall consist of Active, Honorary, and Associate members. The Active membership shall be the owners of automobiles who shall reside in the State of Maine. The Honorary membership shall be such persons as may be, from time to time, selected by the Club. The Associate membership shall be any members of the family of an Active member."

The purposes of the club have in most cases been carried out. The automobile is regarded with favor, and has been given good, sensible legislation protecting owners within reasonable bounds of speed, but the good roads, or rather the best roads,

have not come, though they will in time. In one instance only has there been a case of lack of common sense in legislation, and that is at Bar Harbor, where the selectmen passed an ordinance forbidding the use of the automobile on the principal thoroughfares leading to this town, the summer home of the best people from other of the New England States. Such an ordinance is regarded as the height of conservatism, the product of unprogressive minds.

From a membership of 20 in 1900, the Automobile Club of Maine has now risen to a membership of 65, with a prospect that before the season ends, it may be 100. The interest in automobiles is of the keenest, both among members and non-members. The present officers of the organization are as follows:

President, Thos. J. Foster, of Westbrook; Vice-President, Henry R. Stickney, of Portland; Secretary, Howard Winslow,

the bad weather periods. The cause of this condition, the same that prevails around other cities in the State, is the excessive heavy teaming going on about the towns.

After the traveler reaches Portland the roads begin to grow better, and when he has passed this city, the public thoroughfares are good. In the eastern part of the State, around Bar Harbor, Bangor, and the neighboring towns, and in the northern part of the State, the roads are excellent.

Maine roads are with few exceptions sandy, and especially is this true of that part of the State near the coast. Farther back and in the northern part of the State, the roads are loam. In some places the roads are of clay, and it is in these districts that the traveling is the worst in wet weather. In addition to these three kinds of roads, may be mentioned those of rock, but these do not possess this characteristic to such a degree that they are bad for

into the State. Every kind of scenery is represented; there is the ocean, the woods, the fields, the rivers, the lakes, any one of which is alone worth traveling many miles to see.

All these different phases of scenery come under the immediate observation of those traveling in an automobile. Should they choose to proceed along the shore, they will enjoy sights that can be equalled nowhere else on the Atlantic coast. The first that comes to their attention is Old Orchard beach, where the best view of the ocean in the State is obtained. Here are hotels, pleasure resorts and an excellent bathing beach. Farther along the coast, is Casco Bay, than which there is none that possesses the island beauties here to be seen. And so it keeps on, now it is a small bay filled with little islands, and now gigantic cliffs beaten by the swells of the ocean. The scenery of the Maine coast may be summed up in the words that there is not an unattractive spot on the whole sea-front of the State of Maine.

If the scenery of the Maine coast is attractive, that of the interior is equally so. Here are to be seen the "Sinuous Songo" as one poet termed it, the beautiful Belgrade lakes, the Kennebec and Androscoggin rivers with their mills, the Penobscot river with its lumber camps and log booms. Then there are the great fishing resorts at the Rangeley and Moosehead Lakes. Stretching away to the northward are limitless forests, and way up in Aroostook County expansive tracts of cultivated fields. Maine possesses her mountains also. Some of these are right in the State, but by far the most beautiful are the White Mountains, just over the border in New Hampshire. For scenery, these mountains possess all the charms of the Adirondacks or the Catskills of New York. Here are to be seen Mount Washington, the famous Crawford Notch, and other neighboring points of interest.

The Pine Tree State possesses its pleasure resorts. Portland is surrounded with them, Lewiston has them, Old Orchard has them, Bar Harbor has them. The whole district itself is one big pleasure resort with innumerable places of amusement.

Maine is a historical spot. It was the home of Longfellow, of Thomas B. Reed, of Hawthorne for a time. There are historical old spots all along the coast, at Fort Popham, at Pemaquid, at Portland. To enumerate all the attractions of the State would be impossible. They must be seen, and the traveler touring the State in an automobile has the best opportunity of all.

Maine's scenery and climate bring thousands of visitors to the State every summer, as the excellent hunting does in winter. Many of these come by train, others by boat, and still others by automobile. Not a day passes, but some tourist on his motor car enters Maine.



ONE OF THE MANY LIGHTHOUSES THAT STUO THE MAINE COAST.

of Portland; Treasurer, George E. Sawyer, of Portland.

The automobilist visiting Maine will find everything in his favor. The hotels are of the best, large, well managed, pleasantly situated, and first-class without an exception. In half a day the traveler can go in his vehicle from one large summer hotel to another, with many smaller public houses *en route*. He will find regular automobile stations in Portland and Lewiston and places in other cities where any repairs might be made.

The roads of Maine vary from excellent to very bad, but principally have a status that is half way between, with perhaps a little leaning toward the better.

As the automobilist enters Maine at Portsmouth, he is sure to find bad roads. If the weather has been wet, or if it is the spring of the year, the highways from that city to Portland will be wretched. When muddy they are almost impassable. In the summer time when dry, they are filled with ruts, but are much better than during

travel; on the contrary they have a very firm and fairly even foundation and become muddy only in the wettest of weather.

Maine roads are in all cases hilly. There are big hills and little hills, long hills and short hills. Every highway that is traveled has its succession of hills; these are sometimes near together and sometimes far apart, but in all cases they are to be reckoned with.

One thing there is in Maine that compensates for any slight inconveniences that may be suffered because of the roads, and that is the scenery. Maine scenery is admitted to be unequalled. A recent visitor to the State, who had come over the roads from Boston to Portland in a touring car, said that though the roads were in a frightful state, he would be glad to travel the route again, just for the sake of the scenery. And this is the opinion of every one.

Like the roads, the natural beauties of Maine grow better as one proceeds farther

## Automobile Steering Mechanism.

In the early days of automobile development the attention of designers and builders was so closely applied to correcting serious mechanical defects that no well-directed effort was made toward perfecting the steering mechanism. Machines were sometimes fitted with heavy turn-tables and solid front axles similar to the ordinary horse vehicle equipment, but such crude devices were soon superseded by a steering knuckle arrangement which has since been generally adopted.

Early steering knuckle devices were direct connected by means of links to the steering lever; it soon developed, however, that this method was unsafe excepting on very light cars, so with increased weight and greater speed more perfect methods of steering were found necessary and

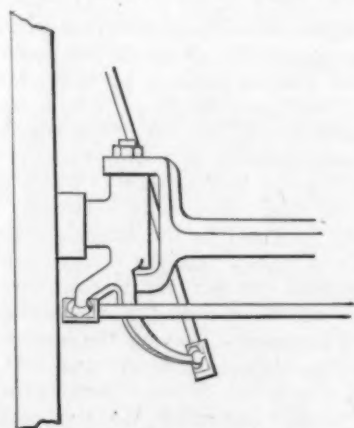


FIG. 2.—DOUBLE BEARING KNUCKLE.

various interlocking devices were employed.

The great advantage of interlocking devices is that shocks caused by uneven roads cannot deflect the direction of steering; thus safe operation is assured.

### DIRECT STEERING.

The direct steering arrangements first applied were very simple. The front wheels were mounted on short axle ends which were vertically pivoted in jaws, brazed or otherwise fixed in the extremities of a tubular or solid front axle. These axle ends, or steering knuckles, were provided with short arms that extended backward and inward pointing toward the center of the rear axle, connection being established between these arms by a link pivoted to their ends. Another link was used to transmit the motion of the hand to the connected steering knuckles. Now, when the operator moved the steering lever the two front wheels turned, but at different angles, because the distance between the inward pointing arms, which were connected by a link as previously stated, was less than the distance between the wheel pivots. It is obviously right that the angle of obliquity of the inside front wheel should be greater than that of its neighbor, so that its axle may point

—in common with the other three axles—toward the turning center of the vehicle. Each front wheel, being able to describe its own arc, moves freely, and skidding is prevented, while at the same time it is

possible to make short and quick turns which otherwise would be impossible. This steering mechanism, or a modification of it, was first applied to horse drawn vehicles over a century ago, and it was afterwards patented in England in 1818, when it became known as Ackermann's

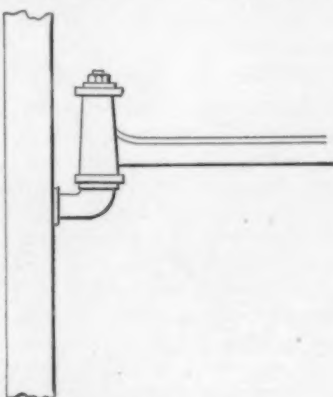


FIG. 3.—SINGLE BEARING KNUCKLE.

device, named after the patentee, and it was finally perfected in France in 1878.

A common form of steering mechanism, embodying the features above described, and frequently used on light gasoline, steam and electric vehicles, is illustrated in Fig. 1.

Mounting the motor in front, which is now becoming a common practice, has



FIGS. 4 AND 5.—AMERICAN AND FRENCH SINGLE AND DOUBLE BEARING KNUCKLES.

brought with it other changes, and in vehicles of this type the connecting link between the steering arms is frequently placed forward of the axle where it is readily accessible. When arranged this

way the arms of the steering knuckles point outward, instead of inward.

### AXLE ENDS.

Axle ends vary in design considerably in vehicles of different manufacture. They are, however, one of two or three general types, with double bear-

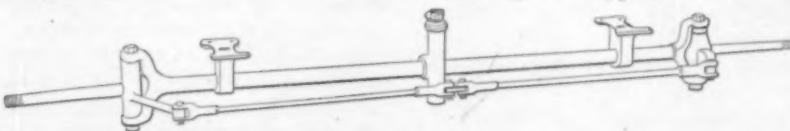


FIG. 1.—COMMON ARRANGEMENT OF AXLE, STEERING KNUCKLES AND RODS.

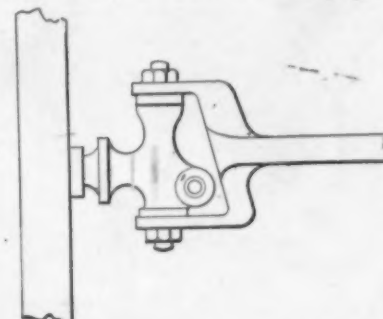
ings or jaws, or with single bearings, as illustrated in Figs. 2 and 3, respectively. No explanation of Fig. 2 is necessary, but Fig. 3 serves to illustrate another feature in addition to the single bearing steering head. It will be observed that this steering head slants considerably; the object of this is to bring its axis in line with the steering center of the wheel, so that the considerable weight supported and the strains caused by traveling at speed over rough roads will be evenly distributed throughout the length of the pivot, all twisting efforts thus being avoided. This construction also renders steering easier.

Another type of steering head having a single bearing is shown in Fig. 4. This design possesses the advantages of simplicity and ease of construction. Another form of steering head and knuckle is illustrated in Fig. 5.

In the early days steering knuckles and other parts were made of brass, later cast steel was employed, and now almost without exception they are drop forged, this construction being much superior.

### BALL AND SOCKET JOINTS.

Steering links are usually made of cold steel, or of steel tubing; they are sometimes connected by ordinary swivel joints, but more frequently by some form of ball and socket joint, of which Fig. 6 shows an example. This device is very satisfactory, being easily adjustable and strong. Connections of this kind are usually packed



with grease, after which a suitably formed leather case is fitted over the joint and tied with a lace; this keeps the dust out, and assures perfect protection. Whatever form of joint is used it should admit of

adjustment, so that lost motion may be readily taken up.

#### INTERLOCKING DEVICES.

Methods of transmitting the motion of the hand, in steering, to the front wheels

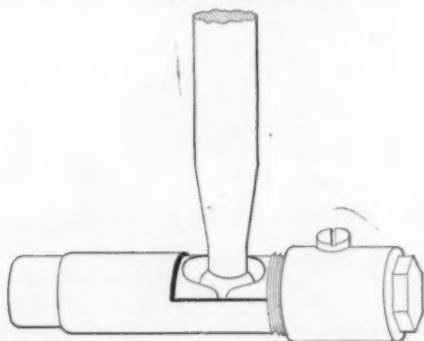


FIG. 6.—BALL AND SOCKET JOINT.

vary with the type and make of car. It has already been stated that the steering mechanism may be directly connected, as it usually is on light vehicles, control being effected by means of a tiller placed in the center or at one side. Heavy cars are usually steered by means of a wheel, communicating with the front wheels of the vehicle through the medium of an interlocking device.

#### WORM AND QUADRANT.

Fig. 7 illustrates an interlocking arrangement that is quite generally used. In this type the worm gear is keyed or otherwise fixed to the wheel-controlled steering-pillar, and meshing with it is a suitably mounted quadrant, elongated to form a lever, which is connected by suitable ball jointed links to one of the steering knuckles. The worm and sector device is enclosed within a case firmly bolted to the vehicle frame. This mechanism takes advantage of the well known irreversible feature of a worm.

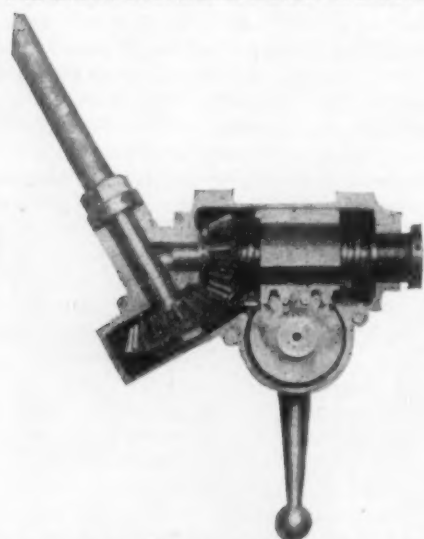


FIG. 9.—ANTI-VIBRATION CONSTRUCTION.

That is to say a worm cannot be turned by pressure against its teeth caused by any movement of the toothed quadrant meshing with it, although the quadrant is very

easily moved by action of the worm when it is turned by the operator of the vehicle. It is understood, of course, that the worm is firmly fixed to the steering pillar of the car. A means to adjust a mechanism of this kind is desirable, because constant wear will introduce "back-lash" or lost motion, in which case the hand wheel will have to be moved considerably before its motion is transmitted to the steering wheels. When considerable lost motion is present nice steering is impossible. One manufacturer accomplishes this adjustment by mounting the toothed part of the sector in a slide, held in place by a suitable nut, which may be unscrewed to allow moving the toothed member into closer mesh with the worm. The tendency of the steering pillar to move up or down, as the teeth of the worm are worn, is corrected by means of a set screw bearing against the lower end of the steer-



FIG. 8.—SLIDING NUT ARRANGEMENT.

ing pillar; the lost motion is taken up by tightening this set screw.

As already stated the important advantage of all interlocking devices is that any tendency of the steering wheels to jump out of the desired steering direction, owing to striking a rut or road obstruction, is absorbed by the mechanism so that the driver has complete control of the car at all times.

#### WORM AND SLIDING NUT.

Another arrangement that accomplishes the same result has been adopted by several large automobile manufacturers. This device substitutes an internally threaded nut in place of the sector; this nut, which is first screwed on the worm, being mounted in suitable slides so that it can move up and down readily but cannot turn. The construction of this arrangement is clearly shown in Fig. 8. It will be seen that a suitably mounted lever, provided with double jaws that enclose the sliding nut, and to which it is pivoted, communicates the motion to the front wheels through ordinary links as before.

#### SLIDING NUT AND RACK.

A device, illustrated in Fig. 9, possesses one considerable advantage in that the

vibration of the front wheels caused by road irregularities, is not communicated to the hand. It will be understood that the previously described worm arrangements will not communicate motion, but they offer no remedy for the constant

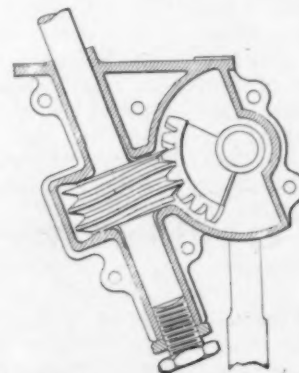


FIG. 7.—INTERLOCKING STEERING DEVICE.

vibration, which becomes tiresome on long trips. It will be seen that the lower end of the steering pillar is provided with a fixed bevel-gear meshing, with a second one attached to one end of the horizontal threaded member or worm, which carries a nut, on the bottom edge of which teeth are cut that mesh with a toothed disc rigidly attached to the steering lever or crank, or made a part of it. Any tendency of the front wheels to jar the hand steering wheel will be absorbed in the horizontal worm mechanism, leaving the hand wheel perfectly neutral. The distance that the front wheels are deflected with each predetermined movement of the steering wheel depends on the proportions of the two bevel gears. An interlocking arrangement of this kind must be of first class mechanical construction, a good example of which is shown in the illustration.

The various interlocking devices pre-

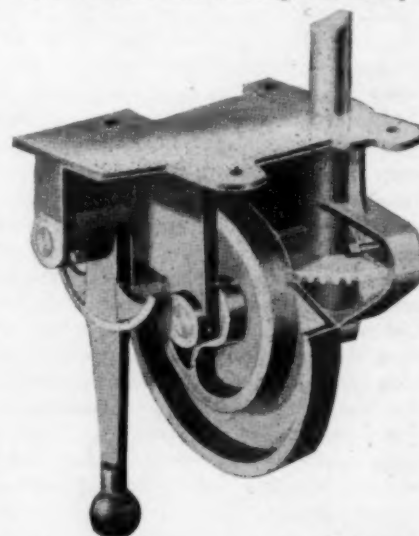


FIG. 10.—STEERING LEVER CHECK.

viously shown are all actuated by hand-steering wheels; an arrangement that may be fitted to existing lever-steered carriages is illustrated in Fig. 10. A bevel gear,

fixed to the lower end of the steering lever, meshes with a bevel pinion on the end of a short shaft, which is suitably mounted in a casting or supporting frame. To this short shaft a metal spiral is fixed, the groove of which is the same width at all parts. A vertical steering crank or lever is mounted on a short shaft placed parallel to and above the shaft of the spiral, this steering crank being provided with a projection or stud that closely fits in the spiral groove. It is obvious that this simple arrangement, which does the required work successfully, is comparatively inexpensive, and the fact that it can be fitted to existing lever-steered vehicles gives it additional interest.

There are of course other systems of steering but generally speaking they offer variations in detail only. The examples already described cover the ground sufficiently to give the novice a good understanding of the different devices now being used.

### A New Lock-Nut.

A lock-nut which locks by virtue of a gripping action on the bolt is shown in the accompanying drawings. The nut itself has an elongated inner end, which is turned parallel and has four slots cut in it. This inner end enters the hole in the special washer shown, and, as this hole is made slightly tapering, it jams the slotted end



LOCK-NUT, OFF AND ON.

of the nut on the threads the more tightly the farther the nut is screwed home. As the inside of the washer is smooth, it is claimed that the nut is as easy to screw off as to screw on, and that it can be used any number of times. In the cuts the nut and washer are shown first partly assembled

and then with the nut screwed home. The device is an English invention.

### New Renault Cooling System.

The influence of the current tendency toward fan cooling of the radiator is seen in the system lately patented by the Renault

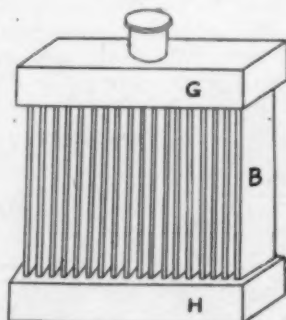


FIG 3.—THE RENAULT RADIATOR.

brothers, of France, which is claimed to be an improvement over the common arrangement with the radiator and fan located at the front of the bonnet. The disadvantage of the latter is that all the dust passing through the radiator is discharged by the fan upon the motor, making extra work if not extra trouble for the chauffeur. In the new Renault system the air does not go past the motor at all, but is shunted around it to the rear of the bonnet, where it is forced through the radiator and then caught and dispersed by a fan built into the flywheel. How this is done will be apparent from the drawings.

Inside of the regular bonnet is a sheet metal wall *A*, making tight connections at top and bottom with the sides of the bonnet. The air slits in the bonnet are located near the front, and are so shaped as to catch the air, which passes into the space between the bonnet and *A*, and travels to the rear. Here it passes around the sides of the

radiator, between the thin vertical tubes *B* of the latter, and into the space *C* between the radiator and a sheet metal screen *D* closing in the front of the latter. A flattened duct *E* leads downward from the latter, discharging backward into the air space just forward and inside of the fly-wheel rim. Projecting from the rim are numerous radial fan blades *F*, which help to suck the air and then discharge it radially into the surrounding atmosphere.

The radiator itself is of the form shown in Fig. 3. The vertical tubes which connect the upper and lower portions *G H* of the tank are flattened till they are very thin, thinner than could well be shown in a drawing, and are spaced not more than one or two millimetres apart. As in all the Renault cars, no pump is used, gravity circulation alone being depended on and the pipes connecting the motor and the tank being as short as possible and of liberal diameter.

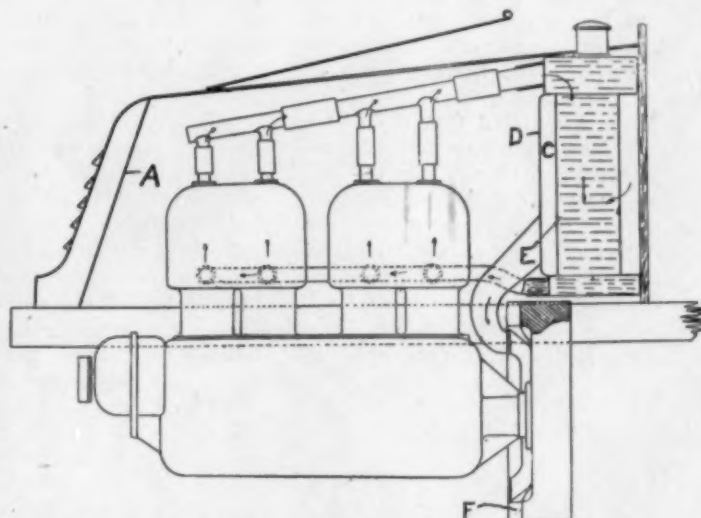
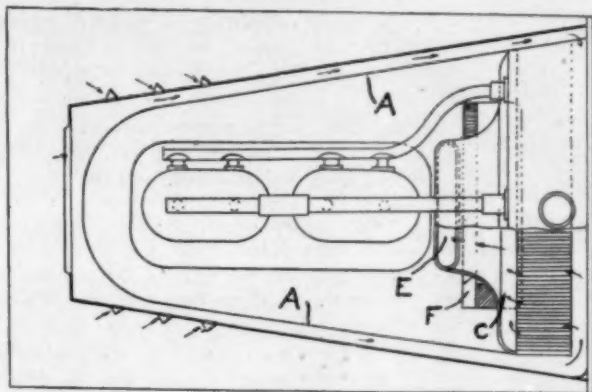
### Detroit Show February 15 to 20.

The dates selected for the next Detroit automobile show are February 15 to 20, 1904, inclusive, which is immediately following the Chicago show.

Owing to the tremendous volume of automobile manufacturing which will be done in Detroit next year, this show is confidently expected to be a great drawing card. The galleries, which were last year occupied by a bench show, will be planked over to give additional space for manufacturers of automobile sundries.

### Just a Case of Appendicitis.

M. B. Vorce, city engineer of Cleveland, accompanied by his wife, automobilized from home to Geneva and return as far as the Nursery, Sunday. Their machine obligingly balked in front of the *Republican News* agency, giving us an item and an insight into the internal organs of a red devil. It was a mild case of appendicitis, easily remedied by repeated application of monkey wrench and elbow grease.—*Painesville (O.) Republican*.



FIGS. 1 AND 2.—THE NEW RENAULT COOLING SYSTEM, SHOWING AIR AND WATER CIRCULATION.

## Digest of Foreign Periodicals.

### ADVANTAGES OF MOTOR CARS SUMMARIZED.

Mervyn O'Gorman sums up the advantages of motor cars in the *Automobile Club Journal*, August 20, as follows: "The advantages of motor cars as compared with other vehicles are, in the briefest summary, their speed, absence of fatigue, ease of control in not running away, in not starting unbidden, in being safely left untended, in excellence of brakes, economy in requiring less stable room, less immediate attention on return from a journey, less lengthy attention on proposing to start forth; the access they give to beautiful scenery, to a large circle of friends when in the country, and to the country when in town, the health they bring with fresh air, with an absorbing pursuit, with distraction from work, with the ease of traveling, with the inoffensive nature of their stabling, and their harmlessness in the streets.

"Economic advantages in not damaging roads, in giving to us, a colonizing nation, a means of opening up our possessions without the necessity for burying in the desert £14,000 for every mile of irremovable track, and leaving us free to remove the rolling stock, if our expectations are not fulfilled. Educational revolution in turning the minds of men of leisure from dilettantism to the too long ignored importance of mechanics in the modern world."

### ROAD TARRING GAINS GROUND.

The tarring of roads in France is becoming the vogue. Experiments are being carried out all over the country, and at Dijon and elsewhere the road engineers are testing this system of dust-laying. Last week representatives of the Association Générale Automobile, the Touring Club, and other bodies were invited to inspect the tarred stretches at Lieusaint, Melun, and Fontainebleau, which had been treated a few months previously. The investigation showed in all cases that the surface was in good condition. Several road surveyors who have had practical experience with the system speak highly of it as a means of suppressing dust and keeping down the expense of maintaining the highways, and at Melun it was stated that the cost of tarring was largely made up for by the subsequent economies, though here the price of tar is very low and the cost of treatment, roughly, is a penny a square metre. One of the streets in Melun has been tarred, and has now a very clean and neat appearance, while the inhabitants are so pleased with the absence of dust, which formerly filtered into their houses, that they are urging the authorities to subject all the streets to the same treatment. One of the strongest arguments in favor of tarring is the increased value it gives to property at the sides of the road. The houses skirting the thoroughfares leading out of Paris have depreciated greatly in value the last few

years, because it is difficult to find people to inhabit them on account of the dust which is raised by the growing automobile and other traffic. The dust whitens the trees and insinuates its way everywhere. If this could be avoided, we should have clean roads, and country properties would go up in value. With such advantages, it is not surprising that the public should be taking such a great interest in the tarring experiments.—*The Autocar*, Sept. 5.

### 100 H.P. RACING MACHINE DESCRIBED.

A partial description, with illustrations, of the 100-horsepower Mors racing machine is given in *Der Motorwagen* of August 31. Front springs, shackles and wheel spokes seem very light for the high power. The radiator consists of nests of coils each composed of four thin tubes joined by the cooling flanges. The dimensions are: wheel gauge, 1,460 mm. (57.48 inches); wheel base, 2,650 mm. (104 inches); thickness of the pressed-steel frame, 4 mm. (0.15 inch); width of its flanges, 38 mm. (1.5 inches); highest vertical demensions of frame, 100 mm. (3.94 inches); height of frame, upper edge, over the ground, 615 mm. (24.2 inches). The two reaches are connected and re-enforced by five transverse girders.

Exhaust valves, inlet valves and the magneto ignition are all driven from the camshaft actuated by a slender cogwheel on the motor shaft. The large diameter of the flywheel (600 mm., 23.62 inches) has compelled a rather high position for the motor. The height of the motor is 720 mm. (28.34 inches) from middle of motor shaft to the closing-edge of the inlet valve. The circulating pump is placed at the right rear of the crank case, driven by cogwheel from the motor shaft. The cylinders are machined from solid steel, and the cylinder heads, grey iron castings, are secured by flanges. The joints between the heads and cylinders are tightened by insertion of varnished copper plates. The relative portion of the cylinders is secured by perforated, triangular steel plates fitting over the heads. The motor is of 145 mm. (5.7 inches) bore and 175 mm. (6.85 inches) stroke.

The carbureter, placed in front of the motor, is large and has the cylindrical float chamber in the center with four spray nozzles extending radially therefrom. The air admixture can be regulated from the driver's seat. The lubrication is primitive. The rear motor shaft bearing is lubricated from a plain oil cup and the front bearing from a grease box, while the middle shaft bearing depends on the splash from the crank case, where the oil supply is regulated by a hand air pump. The cylinders are also splash lubricated. Each cylinder is cooled from an individual water pipe, and the water is distributed to the pipes through a rotary four-way valve, from which an evaporation vent leads to the

atmosphere. Each of the pipes carrying the water back to the tank again has an evaporation vent. The car has four forward speeds and also four reverse speeds. The latter are thrown in by means of a special small lever. The gasoline tank sits high behind the driver's seat, while the water tank is placed very low under the rear of the machine.

### ALCOHOL MOVEMENT IN ENGLAND.

S. F. Walker has an article on the preparation of alcohol from beets and potatoes in *The Autocar* of August 29, and the editor comments on the subject, referring to the use of alcohol as a motor fuel:

"The most serious trouble is, of course, with regard to the excise; but we are convinced that if an active agitation in favor of alcohol were promoted by the Automobile Club working in co-operation with the agricultural societies and kept continually to the fore, this objection could be eventually overcome. It would probably take some years to advance the subject to one of national importance. At the same time, it is well worth doing, not only because we ought to buy nothing from abroad if we can produce a satisfactory substitute for it at home, but also on account of the fact that the movement in favor of alcohol in France has done more than anything else to keep the distributors of petroleum spirit thoroughly up to the mark."

### WITH A NEW CONE CLUTCH.

In a perfectly new car it may be found that on disengaging the clutch to put in the low gear, the male portion may spin so much that the gear cannot be engaged; the reason of this is that the leather of the cone requires wearing down, and this may easily be accomplished by starting up the engine with the low gear already engaged, and then letting the clutch gradually in, at the same time stopping the car from moving by the hand-brake. If this is done for a few moments, the leather will be worn down nicely.—*Motor Car Journal*, Aug. 22.

### EQUIPPED FOR GASOLINE AND ALCOHOL.

Three heavy auto trucks, each capable of carrying a load of seven tons, in addition to drawing two trailers, were recently built by the Neue Automobil Gesellschaft, Berlin, Germany, for service in German East Africa. These interesting vehicles are equipped with four-cylinder motors of 40-horsepower. Two carbureters are fitted and each truck has two entirely independent fuel systems so that either gasoline or alcohol may be employed. The wagons are gear driven throughout. The total weight of each is about 8 1-2 tons.

Mr. Charles Palmer and Mr. Floyd Lamb who started last week for Milwaukee on their automobile got as far as Mautson when the machine broke down. The following telegram, which was received by their friends, fully explained the situation: "Machine busted and so are we; send us some money."—*La Crosse (Wis.) Chronicle*.

## Correspondence

### Runabout Overlanders Reach Detroit.

Editor THE AUTOMOBILE:

Sir:—At last the water and floods went down in Nebraska and Iowa and, after nine days' waiting at Omaha, we started up the mud-splashed machine and pulled out for Chicago. The bridges at Council Bluffs had been replaced only a few hours when we passed over them and the water was still so high in some of the streets that we saw rowboats going and coming and tied to front porches in the lower residence part of the city. We knew the roads would be very bad, if not still impassable on account of washed-out bridges and deep water in low places, but, nevertheless, after dinner on August 31, we bid good-bye to our many friends and took up our long journey again.

Just four days later we were in Chicago, having driven over deep-cut, rough adobe roads. You know what they are if you were ever in Iowa after a rain. The Oldsmobile people say there is "nothing to watch but the road," but I watched the weather quite as much if not more, as I had lost all confidence in Iowa sunshine. You can't trust it fifteen minutes.

I was ashamed to abuse the machine as we did—four days into Chicago—about 600 miles—but she stood it. Once we had the chain come off and had to replace one tire. The deep ruts made more wear on the tires than any other portion of the trip.

We were still destined to get wet though, as twenty miles out of Chicago, after chas-

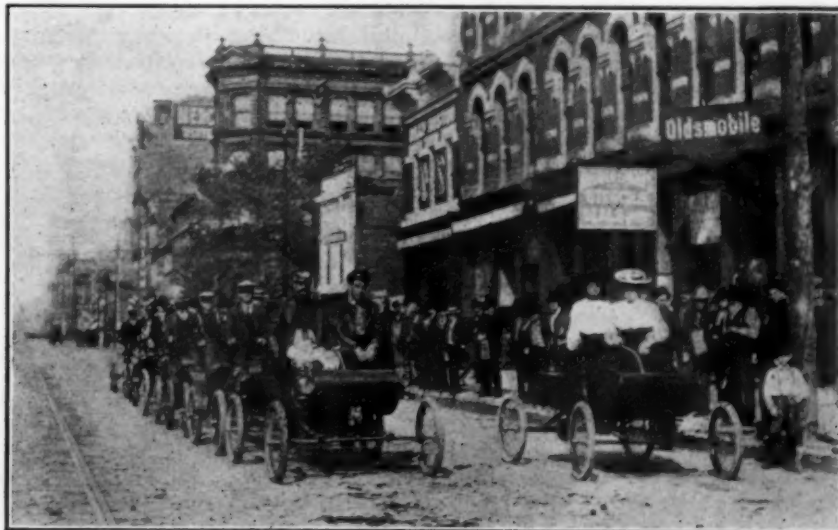
us the "glad hand." Ours was wet and cold, but on arrival at the clubhouse we were soon put in shape for the sumptuous dinner which had been laid in honor of the Grand Rapids Automobile Club, that was making a three-days' visit in the Windy City as guests of the Chicago club.

Our itinerary was: first afternoon from Omaha, Atlantic; next day, Des Moines;

Waseon. Monday morning we left Toledo at 8:15 A. M., and reached Detroit at 12:55.

We made this run of over 300 miles in one hour less than two days. All told, we were seven days from Omaha and "laid over" one day in Chicago.

Our friends took us to one of the best hotels in Detroit and as we appeared in the dining room the eye-glasses went up on all



RUNABOUT OVERLANDERS LEAVING OMAHA, FOLLOWED BY LOCAL MOTORISTS.

third day, Cedar Rapids; crossing the Mississippi River at Clinton, making Rochelle for the last night-stop; then Chicago at 2 P. M. Friday, September 4. The following day we received a telegram at noon asking us to come to Detroit for the Monday and Tuesday races. At 2 P. M. Sat-

sides, for, I am sorry to say, we had no dress suits, and, in our transcontinental traveling suits at this place, we were like a "bull in a china shop." Our faces were tanned the color of a fried oyster. We had a good laugh after every meal.

Rain has postponed the races, but we shall stop to see them pulled off, as anything with a gasoline engine inside is of interest to us now. Fast driving on the rough roads makes it necessary to replace a few spokes; otherwise we are in good shape for the rest of our journey.

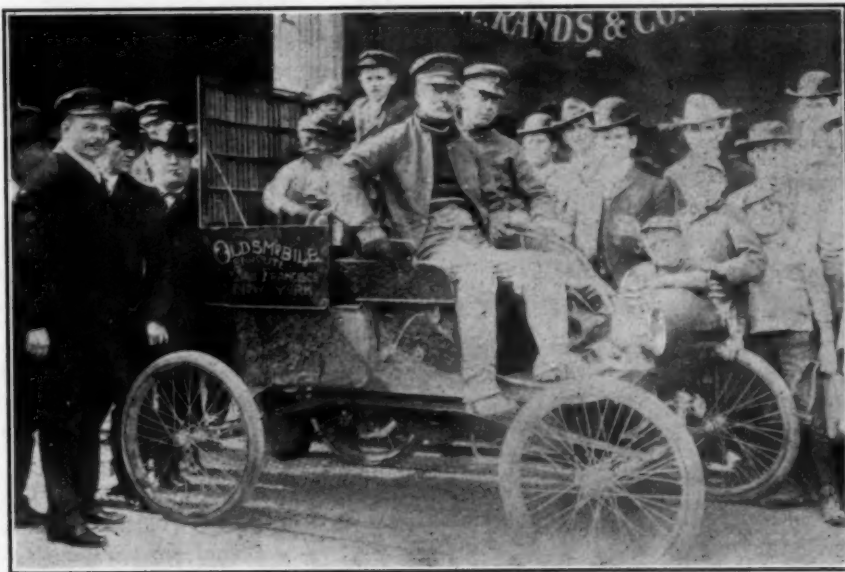
L. L. WHITMAN.

Detroit, Sept. 7.

### To the Pole with Auto-Sledges.

Editor THE AUTOMOBILE:

Sir:—The papers report that another Arctic expedition is to be fitted out for next season and it is spoken of as being especially well equipped. But it is surprising to read that "the dash for the pole" should be made with a dog-train! It seems strange that nothing can be learned from the experience of the past in this direction. It looks to me like a safe estimate that where a dog-train can make one mile an hour, which is above the average according to Melville, a properly constructed auto-sledge should make four miles. If three of these sledges were tied together, one at least, and perhaps two, could generally be dragged as "dead" and not more than three men would be needed generally to run each. Should anything break about the leader, one of the others could be brought at once to the front and the broken one dragged while being repaired.



MESSRS. WHITMAN AND HAMMOND ARRIVING AT DETROIT ON SEPTEMBER 7.

ing us for several hours, the rain overtook us; but we buttoned up the leather coats, pulled up the boot and let the mud fly.

We were met outside of Chicago by a large number of automobiles whose owners had come out from the clubhouse to give

us the "glad hand." Ours was wet and cold, but on arrival at the clubhouse we were soon put in shape for the sumptuous dinner which had been laid in honor of the Grand Rapids Automobile Club, that was making a three-days' visit in the Windy City as guests of the Chicago club.

Now, look at the advantages of the auto-sledge over the dog-train. First, it is safe to estimate that it will go four times as fast as the dog-train over rough ice; second, it can run twenty-four hours a day with three shifts of men while the dog-train must stop and rest; third, the men are protected from the cold and those off of duty can be very comfortable; fourth, the auto-sledge can go through the slush of the summer months which the dog-train cannot move through at all, according to Melville; fifth, the auto-sledge can cross fissures over which a dog-train cannot pass; sixth, when a road has once been made, if it remains open, one of the spare sledges could make frequent trips back to the ship from time to time rapidly—a matter of vast importance.

There are so many advantages of a well-constructed auto-sledge over the dog-train that it seems a pity to make this last trial with the means which have always failed.

It is not desired to paint the trip to the North Pole as a picnic even with the auto-sledge, but as compared with the dog-train it looks like a picnic and there seems a possibility of winning, while the dog-train seems to incur very great hardships with hardly a chance of success. The auto-sledge should be used in all cold regions, doing away with much hardship and facilitating travel and other work.

This subject should be urged upon the attention of those having charge of this expedition to see if something modern cannot be brought into use this time.

W. W. BURSON.

Chicago, Sept. 12.

### Anti-Freezing Solution.

Editor THE AUTOMOBILE:

Sir:—What can I use to cool a gasoline motor in winter that will not freeze? Can I put anything in the water?

W. F. R.

Use a solution of calcium chloride (not chloride of lime) of a specific gravity of 1.15 for temperatures above zero Fahrenheit, or 1.20 for temperatures above—15 degrees. Replenish for evaporation with clear water. This solution should not be used in zinc or galvanized tanks.—ED.

### Automobile Insurance Rates.

Editor THE AUTOMOBILE:—

Sir:—I notice in your last issue an article on insurance of automobiles. Will you kindly give me a list of the companies that insure them, and, if possible, their rates.

A. SMEDLEY.

Oil City, Pa., Aug. 26.

The insurance of automobiles against fire is conducted almost exclusively through syndicates. I mean by this that several companies get together and appoint a broker as a representative, and when a policy is wanted this broker makes his inspection and recommends the issuance or declination of the same. The line, say \$10,000, is then written on one policy, but it is divided among all the companies.

This makes it impossible, therefore, to state the names of the companies.

The rates on "floater" fire policies vary from 3 1-2 per cent. to 5 per cent., according to the machine, its power, size and where it is generally kept when not in use. The liability policy costs from \$50 up for electric and \$60 up for gasoline machines. The gasoline machines are rated upon the horsepower, some companies writing up to 8-horsepower at a minimum rate of \$60 and others up to 12-horsepower at the same rate; after this some companies charge \$5 for each additional horsepower and others \$2.50 for each additional horsepower.

There is an undeniable tendency to increase these rates. DIXIE HINES.

New York, N. Y.

### Belgian Auto Industry.

The little country of Belgium is shown by recent statistics published in the French automobile papers to have grown into the second most important country in Europe in the production of automobiles, having wrested the honor from Germany by a very close margin. From the following table of imports and exports it will be seen that while the United States neither sends complete vehicles to, nor buys them from Belgium, she sells some parts to the Belgian manufacturers.

France sends more than four times as many automobiles to Belgium as all the other countries combined, while England buys more Belgian cars than all the other countries together. While Belgium imports increased in one year from 85 to 125 cars, her exports in the same period decreased from 216 to 206, although at the same time the total value of the exports increased by \$70,640.

#### AUTOMOBILES IMPORTED INTO BELGIUM.

From	No.	1901.	No.	1902.
Germany.....	6	\$2,500	8	\$5,125
England.....	2	1,200	3	2,650
Holland.....	1	400	8	4,450
France.....	65	71,400	104	78,500
Other countries.....	11	5,200	2	1,200
Total.....	85	\$80,700	125	\$91,920
Increase.....				11,220

#### VALUE OF DETACHED PIECES IMPORTED.

From	1901.	1902.
Germany.....	\$11,000	\$2,750
England.....	4,300	3,600
United States.....	2,550	100
France.....	54,700	83,950
Other countries.....	325	900
Total.....	\$72,875	\$91,200
Increase.....		18,325

#### AUTOMOBILES EXPORTED FROM BELGIUM.

To	No.	1901.	No.	1902.
Germany.....	19	\$12,070	30	\$22,460
England.....	89	57,500	118	149,400
France.....	55	50,600	22	33,000
Italy.....	1	400		
Holland.....	33	27,400	22	17,250
Other countries.....	19	23,500	14	15,000
Total.....	216	\$171,470	206	\$224,110
Increase.....				70,640

### International Trading in Automobiles.

Automobiles to the value of \$6,200,000 have been imported into England the last seven months, and the month of August alone has seen the arrival at English ports of more than \$1,000,000 worth of motor cars, motor cycles and accessories.

It is impossible to estimate from these figures the number of French and German automobiles imported into England, because a great many cars of American manufacture are included in the valuations given, but it is fair to assume that a large proportion of this total valuation represents automobiles of Continental make, on account of the relatively high prices at which French and German cars are sold.

On Friday, September 4, there were on the floors of the Appraiser's Warehouse in New York foreign automobiles to the invoiced value of \$125,000. It is safe to assume that few of these cars were made in England, as it is well known that English cars have not, so far, found an appreciable market in this country.

It is, therefore, evident from these figures that French and German automobile manufacturers are enjoying the profits to be derived from an excellent market on this side of the Atlantic, as well as in England.

In considering the valuation of foreign cars consigned to dealers and private owners in this country, the fact must not be overlooked that such vehicles are rarely accepted by the Customs House officials at their invoiced values.

A case in point was brought to light on September 8, when a 30-horsepower Mors, consigned to Col. John Jacob Astor, was held by the Board of General Appraisers pending a readjustment of the invoice valuation of \$6,000. Duty was finally paid on an increased valuation and the car released.

At one time recently there were no less than sixteen French automobiles in the Appraiser's Warehouse, all consigned to a single New York dealer, besides many vehicles consigned singly to different parties.

### Auto as a Fire Extinguisher.

A garden hose attached to the pump used for filling the boiler of a steam car in which a party flying the University of Pennsylvania colors was driving from East Litchfield, Mass., to Torrington, Conn., recently proved effective in extinguishing a fire which was discovered in a small barn as the motorists entered Torrington. The car was run into the farm yard, a convenient hose attached to the pump and the blaze put out before the fire department arrived.

Nell—She has an automobile tongue.

Belle—What do you mean?

Nell—Oh, she's always running other people down.—Philadelphia Record.

## Endurance Run Stages and Course.

Secretary Harry Unwin, of the National Association of Automobile Manufacturers, and William Arber, of the Searchmont Company, reached Pittsburg on Saturday evening, September 5, after having toured over the entire course of the October endurance run from New York.

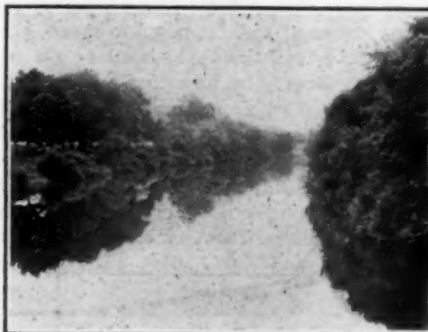
They left New York on August 18 and journeyed to Pittsburg via Kingston, Pine Hill, Binghamton, Elmira, Corning, Bath, Buffalo, Erie, Cleveland and Youngstown, most of the way in rainy weather.

and will be made at 7 A. M., on Tuesday, October 6, instead of Wednesday, the 7th, as previously planned. The headquarters each evening will be as follows: October 6, Pine Hill Hotel, Pine Hill; October 7, Bennett House, Binghamton; October 8, Nichols House, Bath; October 9, Iroquois Hotel, Buffalo; October 10, and Sunday, Oct. 11, Reed House, Erie; October 12, Hollenden Hotel, Cleveland; October 13, Tod House, Youngstown, Ohio; October 14, Hotel Schenley, Pittsburg.

September 22, at 4 P. M., and no entry will be accepted after that hour.

It has been ascertained that 1,500 arrows will be needed to mark the course.

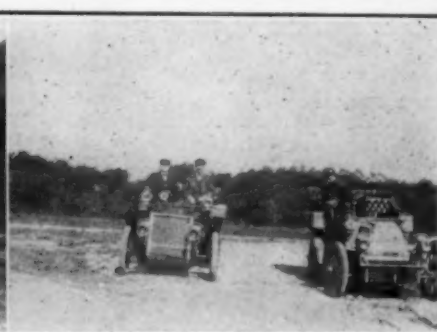
The run will be completed in Pittsburg on Wednesday evening, October 14, as at first scheduled. Thursday has been scheduled for a hill-climbing contest over a 9 to 12 per cent. grade between Bond and Wellesley Streets, on Sheridan Avenue, the distance being a quarter of a mile. A braking contest will also be held on the same day, the Stanton Avenue entrance to Highland Park having been selected, offering a grade of from 2 to 5 per cent,



Mahoning River, One Mile Beyond Warren, O.  
Seen from the Road.



A "Repaired" Road, Two Miles West of  
Chagrin Falls, I.



Turn in the Road Out of Cleveland, at Shaker  
Settlement.

The Searchmont touring car used was literally covered with mud and dirt when it was driven into an automobile storage station in Grant Street, Pittsburg, but Mr. Arber would not allow it to be cleaned; he shipped the car to the factory at Trainer, Pa., the following Monday just as it was. The tourists spent much time on the trip taking notes and making photographs for the use of the contestants in the run. The distance from Cleveland to Pittsburg, as made by Messrs. Unwin and Arber,

It has been impossible to obtain covered garages for the number of cars expected, except in Cleveland. It will be necessary, therefore, for operators to be supplied with waterproof covers for their cars.

It will also be necessary for each car to be supplied with a New York, New Jersey and Pennsylvania license and license tag. Blank application forms may be obtained from the office of the association, No. 7 East 42nd St., New York.

The rules of the run provide that infor-

Friday and Saturday will be devoted to racing at the driving park at Brunots Island.

### ITINERARY OF THE RUN.

Following is the itinerary of the run:

#### TUESDAY, OCTOBER 6.

Start at Weehawken, near Point View Hotel. Woodcliffe, 1½ miles; Little Ferry, 6½; Hackensack, 8½; Ridgewood, 16½; Hohokus, 18½; Waldwick, 19½; Allendale, 21; Mahwah, 25½; Suffern, 27½; Ramapo, 29; Slootsburg, 30½; Tuxedo, 33½; Southfields, 37½; Central Valley, 44½; Highland Mills, 45½; Woodbury Station, 47; Mountainville, 50½; Orrs Mills, 53;



First Railroad Arch Near New York-Pennsylvania  
State Line.



Bath, New York, Where Third Night's Stop  
Will Be Made.



Second Railroad Arch, Near New York-Pennsyl-  
vania State Line.

was about 133 1-2 miles, and the road from Youngstown on was found quite hilly and in many places deep in sand. Because of this the run from the lake city will be made in two days, instead of one, as originally intended.

The total distance to be covered, as at present laid out, is about 793 miles. The run will start from Weehawken, N. J., opposite 42nd Street, New York City, from a point near the Point View Hotel,

mation shall be furnished by observers only to the superintendent of observers, the object of the rule being to prevent misleading accounts being given out bearing a semi-official stamp. Provisions are now being completed to furnish the daily press with authentic information each evening at about 8 o'clock, the work to be carried out by a direct representative of the N. A. A. M.

Entries for the run close on Monday,

Vail Gate, 54½; West Newburgh, 57½; Newburgh, 58½; Cedar Hill Cemetery, 64½; Marlboro, 67½; Milton, 71½; Highland, 75½; Ulster Park, 86½; St. Remy, 90½; New Salem, 91½; Eddyville, 91½; Wilbur, 92½; Kingston, 94½; Stoney Hollow, 100½; West Hurley, 102; Olive Branch, 104½; Shokan, 108½; Beechford, 130½; The Corners, 114½; Phenicia, 118½; Allaban, 123½; Shanbaken, 124½; Pine Hill, 130½.

#### WEDNESDAY, OCTOBER 7.

Griffins Corners, 133½; Flieschmans, 134; Margaretville, 140½; Dunraven P. O., 144½; Andes, 152; Delhi, 165½; Treadwell P. O., 175½; Franklin, 182½; East Sidney P. O., 187½; Unadilla, 192½; Bainbridge, 202½; Afton, 208½; Nineveh, 214½; Harpersville

Village, 215½; Belden, 219½; Sanitaria Springs, 225½; Port Crain, 228½; Port Dickinson, 233½; Binghamton, 236½. (Mileage for day, 105½.)

THURSDAY, OCTOBER 8.

Union 245½; Campville, 252½; Hiawatha, 255½; Owego, 259½; Lounseberry, 265½; Nichols 268½; Smithboro Bridge, 270½; Barton, 273½; Ellestown, 278½; East Waverly, 279½; Waverly, 281½; Chemung P. O. 285½; Chemung Station, 286½; Wellsburg, 292½; Elmira, 298½; West Junction, 303½; Horseheads Station, 305½; Big Flats, 310½; East Corning Station, 313½; Gibson, 316½; Corning, 316½; Painted Post, 321½; Coopers, 324; Campbell, 328½; Savona, 333½; Bath, 339½. (Mileage for day, 103½.)

FRIDAY, OCTOBER 9.

Kanona, 343½; Avoca, 348½; Wallace, 351½; Cohocton, 356; Patchins Mills, 363½; Perkinsville, 365½; Dansville, 369½; Kysorville, 378½; Sonyea Craig Colony, 381½; Mt. Morris, 385½; Geneseo, 392½; Avon, 401½; Caledonia, 408½; Leroy, 415½; Batavia, 425½; Corfu, 437½; Crittendon, 442; Mill Grove, 445; Bowmansville, 451½; Buffalo, 462½. (Miles for day, 122½.)

SATURDAY, OCTOBER 10.

Woodlawn Beach, 472½; Wanakah, 477½; Idlewood, 481½; Evans Centre, 487; Farnham, 492½; Irving Station, 494½; Irving, 494½; Silver Creek, 498; Sheridan Centre, 504; Fredonia, 510; Brocton, 516½; Portland, 519½; Westfield, 526½; Forsythe, 531; Rippley, 534½; State Line, 537½; Northeast, 542½; Mooreheads, 546½; Harbor Creek, 549½; Wesleyville 553½; Erie, 555½. (Miles for day, 93.)

## Story of a Transcontinental Journey.

### With "Old Pacific" Through the Waterless Section of Nevada, Along Great Salt Lake to the Temple City of the Mormons.

Shortly after the last instalment of the story describing the first stages of the Packard car's transcontinental trip was published in THE AUTOMOBILE of August 15, the car arrived at its destination in New York. The continuation of the story as given hereafter is a transcript from the daybook kept by M. C. Krarup during trip, and has been prepared with a view to giving all the essential facts regarding the nature of the country traversed and everything of special or mechanical interest to motorists as well.

#### WELLS, NEV. TO TECOMA, NEV

July 2—Start from Wells 7:40 A. M.

operator. Later saw the tracks of the car at Toano and heard that the trial had been satisfactory. When adjusting the ignition cam forgot side panel of car on the ground, cyclometer 754 1-2; time, 8:30 A. M. Car run back, Fetch alone up, and returned 9:40 o'clock, cyclometer 768. He drove at highest possible speed, showing that trail here permitted 13 1-2 miles in one hour, ten minutes; not so bad in sagebrush! Pinion pine and scrub cedar were getting common and grew considerably higher than the sagebrush. At Wells were the springs or wells of the Humboldt River—round holes in the ground from 3 to 8 feet in diameter filled to the brim



WHITE ALKALI MARSHES NORTH OF GREAT SALT LAKE.—Promontory Mountain Range in Background.

MONDAY, OCTOBER 12.

Miles Grove, 574½; East Springfield, 579½; West Springfield, 583½; East Conneaut, 587½; Conneaut, 588; North Kingsville, 596; Ashtabula, 602; Geneva, 611½; Madison, 618½; Painesville, 629½; Mentor, 635½; Willoughby, 640½; Euclid, 649; Cleveland, 663. (Mileage for day, 107½.)

TUESDAY, OCTOBER 13.

Chagrin Falls, 682½; Auburn Centre, 690½; Auburn Corners, 692½; Troy, 696½; Parkman, 700½; Southampton, 709½; Warren, 716½; Girard, 726; Briar Hill, 729½; Youngstown, 731½. (Mileage for day, 68½.)

WEDNESDAY, OCTOBER 14.

Poland, 736½; New Middleton 751½; Petersburg, 746; Enon, 747½; Darlington, 751½; Beaver Falls, 758½; New Brighton, 760½; Freedom, 765; Conway, 765½; Baden, 768½; Economy, 771½; Leetsdale, 773½; Sewickley, 775½; Grenfield, 779½; Emsworth, 781½; Avolon, 783½; Woods Run, 786½; Allegheny, 786½; Hotel Shenley, 793. (Mileage for day, 61½.)

Cyclometer, 745 (722 & 23); barometer, 24.3; thermometer, 56. A drop of 40 degrees since yesterday. Power of car seemed affected. The oil (Read gas engine cylinder oil) was cold and stiff and did not feed properly. Ignition cam also found to have been worn slow. Latter readily adjusted. Oil soon warmed up. Heard at Wells of Haynes-Apperson survey which had been shipped to Toano—about 40 miles east—by mistake, on May 21, and which it was now intended—rather than to have it shipped back—to use for a stage between Wells and Ely, a mining camp, 150 miles south. Trial trip had been begun June 30, from Toano with G. W. Ridenour, of Kokomo, Ind., as

with brackish water, somebody told us—and henceforth it was true desert, in so far as absence of water was concerned. For some 12 or 15 miles it seemed subirrigated, however, judging from the rank vegetation referred to. Then followed a dreary country, knowing no other moisture than the snows of winter and brief rains, leaving no other trace than dry, irregular ditches or gullies washed through the sand or the alkali. Trail to Toano was hard to find, because the Southern Pacific railroad through this section was rebuilding its bed, making large fills and cuts to shorten distance and moderate grades. Old and new road-beds were, in several instances, over a mile apart; and by this work old trails

had been cut up and destroyed; misleading grading-camp trails had been formed, and for the time being, it seemed impossible to make headway without crossing the railway tracks innumerable times and scaling a series of forbidding hills. At a section house near Fenelon (why the old French bishops and pedagogues should have been remembered in this desert, seemed a mystery) eventually were confronted with a hill that stunned us. Yet others had climbed it. Probably grading-teams of 6 or 8 horses or mules. Two tracks led to the top; one straight and the other with a sharp bend third of the way up, but the upper portion of both looked like vertical walls from a little distance. To go up on the lowest gear steadily was out of the question. It was a case of jumping the car by fly-wheel momentum, stopping on the brakes when the momentum gave out—and jumping again. The chain had its four new links in, but it was not quite certain that other links had not been weakened. However, the attempt had to be made. Allyn and self secured stones to place behind the drivers (the rear wheels) at critical moments, and proceeded to help by pushing. Pac was jumped probably five or six feet. Quick brake action and equally quick stone action had the desired effect, though it trembled in the balance. The operation was repeated, we did not know how many times. Allyn

emergency. The beauty of inanimate mechanism! We rested a little and commenced again. The grade became a trifle easier. A few more jumps and the top was reached. Cyclometer readings had been neglected, but the klinometer was taken

figuring that Pac had about 30 horsepower on the jumping plan and that the spring-mounting of the fly-wheel, the special construction of the clutch and the material of the gears would take care of the strains.

Reached Toano, cyclo. 798, 1:30 o'clock;



OLD "PACIFIC" AT CREST OF 40 PER CENT. GRADE AT FENELON, NEV.

out of its case, and walking back to the bottom—backward as going down a hatchway—we proceeded to measure the grade at various points, placing the klinometer on the side panel of the car, which was removed for this purpose. The grade

elevation 5,970 feet. On 27 miles between Toano and Tecoma no serious difficulties, but an abundance of weird views. Ten miles out of Toano, Pilot Knob, know to every '49'er, and one of the highest peaks in the State of Utah, hove in sight, being visible above a lower range some 10 or 12 miles to the East but still in Nevada. Long stretches of barren, stony ground and thousands of acres of white lands between the trail and the low range produced the usual effect of hopeless desolation varied somewhat in this case by the bright colorings, mostly mottled red, of the mountain sides from which promontories shot out toward us at intervals. Toward Tecoma again more sand and more sagebrush. Near the town, first use for axe—usually strapped on top of reserve gasoline tank in rear. It served to clear the "road" of some uncommonly stout sagebrush stumps which refused to yield to our usual high-handed method of mowing them down by the weight of the car. Arrival at Tecoma recorded at 4:25 P. M., cyclometer 825. Fifteen gallons of gasoline taken on board here, the supply having dwindled to two gallons, which was about as low as it ever was allowed to run, west of Denver.

#### TECOMA, NEV., TO PROMONTORY, UTAH.

July 3.—Start from Tecoma 5:45 A. M. Made an attempt to cut the way short and avoid the disagreeable travel near railway grading-camps where heaps of tin cans, boards with nails in, and all kinds of offal increased the chance of tire puncture. Were turned back, however, by an impassable ravine crossing trail about 15 miles from the start. Going back toward Lucin station—only 11 miles from Tecoma—had some bad sand to cross. It was so deep and loose that Pac occasionally sank down



GUTTERS ACROSS THE TRAIL—Hundreds of Them, near Lucin.

and self were panting for breath, all were excited. Altitude, work, steep grade and excitement combine to make a lowlander pant. Pac alone kept cool while submitting to the strain and responding to the

varied from 19 to 25 degrees. The average seemed to be 22 1-2 degrees or about 40 per cent. The 25 degrees, or 44 1/2 per cent., was reached only for a rod or so.

After this we ceased to fear grades,

till the differential case dragged. With full power the car could have pushed the sand aside, brush and all, but out of three revolutions of the drivers probably only one was good for traction, while the other two served to pack the sand a little so the tires could take hold. Here as well as

pression on the memory, sore spots in the driver's hands, and a very lively realization of the fact that a car to go across such country must have a highly flexible running gear and several other qualities, that would tempt the most modest manufacturer to do a little pardonable bragging.



DRIVING ALONG BEAR CREEK, NEAR CORINNE, UTAH.

near Wadsworth and Winnemucca this slipping of the drivers in the sand doubtless raised the cyclometer record somewhat above the actual mileage. Including the detour the record advanced from 825 to 852 miles before Lucin was reached. Two miles west of this insignificant station the railroad branches off southeasterly to cross Great Salt Lake, and save the great curve by way of Promontory; an enterprise which has become widely noted because one construction train after another has been lost in the attempt to build a safe road-bed across the volcanic mud, which seems to underlie the lake. Drinking water is scarce at Lucin, but by depositing a half-dollar piece on a shelf in a nearby shanty it was found possible to produce a different beverage gratis at some distance from the place of deposit. The inference was that the railroad favored restriction on the sale of spirituous liquors near its camp.

Any one who may try in the future to drive an automobile from Lucin to Terrace, cyclo. 875, will remember the trip afterwards. Gullies cross the trail about every 100 feet, forming the most efficacious speed check imaginable. The front wheels must be lowered into each of these gullies cautiously, with danger of driving the headlight against the opposite bank. Then the rear wheels must be nursed down into the ditch, and, if the latter is not very broad, that means that the front end of the car must simultaneously be nursed up on the other side. Then, when the rear wheels are safely down, the whole car must be shot up by fly-wheel momentum, and if the two banks don't happen to be parallel this means a very energetic use of the steering gear, too, so as to have both front wheels in contact with the ground, and not one of them lifted into the air while the other is twisted around scraping against the paint of the boot. This series of operations repeated about 50 times per mile for 23 miles, leaves an indelible im-

pression on the memory, sore spots in the driver's hands, and a very lively realization of the fact that a car to go across such country must have a highly flexible running gear and several other qualities, that would tempt the most modest manufacturer to do a little pardonable bragging.

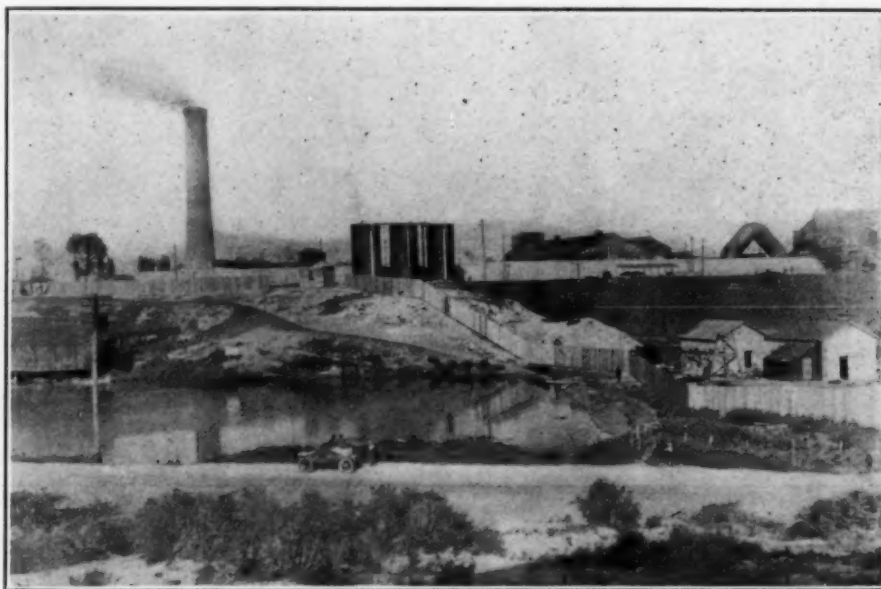
Arrived at Terrace 11.30 A. M.—elevation, 4,548. Distance by rail to San Francisco, 709 2-11. Our cyclometer distance was, as said, 875 miles. Distance

where a spur of the Promontory Range must be scaled. The railroad makes a wide detour around it but leaves no room for a wagon track. The railroad men, quite numerous at this point, assembled to see Pac climb the grade, which looked very much like the 40 per cent. hill at Fenelon. It was perhaps not quite so steep for all its length, but, on the other hand, the footing was impaired by loose stones, which once dislodged, rolled all the way to the bottom. The method adopted to scale this hill, known far and wide in the West, was the same as at Fenelon and with the same gratifying results. The mountain has three crests and the first summit was reached from 5.30 o'clock till 6.01, and it was just 8 o'clock before arrival at the historical railway village known as Promontory, where the engineers of the Southern Pacific building east, and those of the Union Pacific, building west, met on May 10, 1869, completing the first trans-continental railway.

Cyclometer at Promontory, 939; gasoline consumed July 3, about 8 gallons. Lubricating oil consumed since leaving San Francisco, 5 gallons.

#### FROM PROMONTORY, UTAH, TO SALT LAKE CITY.

July 4.—From Promontory over Corinne, Brigham, Ogden, to the capital of Utah, starting 7.12 A. M., and arriving 3.45 P. M. Distance was supposed to be 90 miles, but cyclometer showed 940 (one mile of driving evening July 3 to find lodging for Pac in Promontory; it was finally left in front of open bedroom window) and 1,046 at the garage in Salt Lake City. July 2 and 3



SMELTER AT MURRAY, ON THE WAY TO PROVO, UTAH.

to Ogden by rail, 124 2-10 miles. Road to Kelton mostly level over white alkali land. Arrived there 1.30 P. M., cyclo., 905 1-8; temperature, 76 1-2; elevation, 4,224. Easy driving with view of the white Salt Lake marshes to Lake station,

the strains on the machine had been excessive and frequent, the fly-wheel shield had been polished, the battery box scraped and scoured, the shovel handle badly shredded, all from driving through and over the brush, but nothing had happened to

interfere with the regular operation of the car, except that at cycl. 882 the differential box slid onto a ridge inadvertently—in the same manner as previously recorded—and the chain was stretched somewhat thereby and ran hard. At cycl. 888 1-4 it was considered advisable to oil the clutch. That was all. To-day was even less eventful and driving easy, though it was plain that the car had suffered somewhat from its ordeals. The front spring, inverted elliptic, sagged after the inordinate abuse to which it had been subjected in the gullies and "twisters" (twister is a gully with converging banks or crossing the trail at an acute angle); the lug holding the rear axle brace rod on the right was broken, nobody knew where; the chain's pitch was irregular—yet everything functioned well enough to run over 100 miles in 8 1-2 hours.

From Promontory the road soon led down close to the level of the white, barren marshes adjacent to Salt Lake, which are getting larger in area each year while the lake grows constantly smaller, being deprived more and more of its afflux of fresh water from Bear Creek and other streams, because this water is used for irrigation in ever-growing measure, as the settlement of the Jordan Valley and the contiguous sections increase in population.

For persons emerging from desert land, the first sight of Corinne was refreshing. Trees, especially the slender poplars which characterize Mormon districts, grew everywhere. Streets were broad and well-kept. Main ditches and laterals filled with water from Bear Creek extended in all directions and the river itself flowed full to the brim through the outskirts of the town, where a model road teemed with carriages and picnic wagons decorated with flags and full of festive-clad people bent upon celebrating the day of Independence. In Brigham, ensconced at the foot of the Wasatch Range, testimony to the Mormon thrift and agricultural enterprise multiplied. Here we saw the first motor car since leaving Sacramento in the streets of Brigham. It was an Oldsmobile. Nods of fellowship were exchanged in passing.

The road to Ogden followed the foot of the mountain, high, rugged and streaked with snow, only a narrow strip of tilled and closely-built up area intervening, while the highly cultivated valley extended for a considerable but irregular distance to the right, merging by a gently undulating slope into the lake or marshes. Arrival at Ogden, 12.15, noon. Left, 1 o'clock. Thirty-six miles to Salt Lake City along broad fairly well-kept road with few grades, the valley all the time to the right, and the whole distance commaded off with apparently thriving villages nestling under the mountains.

Shortly after arrival in Salt Lake City, Pac was attached by sheriff as security for a claim for damages against the Packard Motor Car Co., of Warren, O., the makers and owners of the car. This was filed by an individual who had desired to go with

the car across the continent in the capacity of a pathfinder, but whose services had been dispensed with as of no genuine value, before the start from San Francisco.

July 4 and Sunday, July 5, nothing could be done to liberate the car, which remained in the sheriff's care. The necessary formalities extended to the afternoon of Monday, July 6, and then there were gasoline arrangements to be looked after, so the fresh start was not made till Tuesday morning. Meantime the rear brace lug had been replaced by the assistance of a blacksmith, and all machinery had been inspected, cleaned and oiled, with the exception that the motor proper was not touched.

July 7.—Start Salt Lake City, 7.20. Civilized road through Murray, Lehi and American Forks to Provo—the "Garden City of Utah"—where arrived 10.45 A. M.,



IN SPANISH FORK CANYON.

cyclometer, 1,092, or 46 miles from start. Astonished at the size and importance of smelting and refining works at Murray and Lehi. At latter place saw a mountain of cinders and slag and noticed that the road had been improved with this material. Some rough country at the boundary line between Salt Lake and Utah counties, where a good retrospective view of the Lake Valley, which here narrows down close to Jordan River, is obtained. Dinner, and 3 gallons gasoline at Provo. Left 12.35 and took wrong street out of town thereby encountering an unexpected bad stretch of heavy yellow sand about 300 yards long, where it was all we could do to pull through, though the grade was not over 5 per cent. As the wheels spun 20 minutes, full motor speed on low gear, this short stretch of sand was about equal to 3 miles of steep hill.

A chap in Provo had volunteered road information, and, as in nearly all cases, when persons were unusually eager to impart their alleged knowledge, it proved unreliable.

He sent us through the interesting village of Spanish Forks, which was four miles out of the best way and, moreover, caused us to get mired near an overflowing irrigation ditch when afterwards cutting across to the right road. This happened at 2.15 P. M., near the entrance to Spanish Fork Canyon. Willow, sagebrush and scrub oak were cut down to get traction out of the morass and the chains, carried for this purpose, were wrapped around the tires. By this means the car finally extricated itself from the first trouble of this kind at 2:45 o'clock, and a few moments after we entered the canyon, where we found "a good road for slow driving" and pleasing scenery.

At Castello Springs in this canyon, elaborate but decaying buildings and a large dancing estrade bore witness of an unsuccessful attempt to create a pleasure and health resort. The hot water from the springs was of the variety said to be health giving because it tastes bad. Up to Mill Ford the canyon was narrow and the road up and down with grades not exceeding 12 per cent. Cliffs of red sandstone or similar rock hedged the narrow passage, and in the bottom a thick growth of box elder, willows and roses, intertwined, and many other trees unknown to us rose in places to the level of the road or even overshadowed it, and again sank down to the depth of the gulch, leaving a free view ahead. Further on, beyond Thistle Junction, the canyon broadens into a valley some 100 to 500 yards wide, with many signs of husbandry and cattle raising, and the rock cliffs alternate with banks of white clay with a scattered growth of timber. At one point in this valley we bumped against a big stone concealed in an innocent looking bush and turned the rear axle with springs and braces, all together.

An accompanying illustration shows the car (half concealed by a fence) while the axle was being turned backed. Close by is seen a grotesque rock formation at the top of the cliff, which has become a landmark for those following the Denver and Rio Grande Railway, and the view is taken from the extreme opposite side of the valley, 5.35 P. M., cycl., 1,129.

Going in and out of Thistle Junction, where the D. & R. G. railway sends out a branch road through a canyon extending southward the passage is narrow and the grades are steep for a while, and from one point the little railway village looks very picturesque, hemmed in, as it seems to be, on all sides by mountains of considerable height and occupying a little triangular space at their base with absolutely no room for expansion. Reached Tucker 7.20 P. M., cyclometer, 1,141. Found hospitable lodgings at hotel conducted by Mrs. H. Earll, a "woman with a history" in the annals of Utah, as she stated herself—without volunteering further details, however.

# THE AUTOMOBILE

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SATURDAY, SEPTEMBER 19, 1903.

## TRACK FATALITIES—A LESSON DRIVEN HOME.

To those who last year read aright the lesson of the terribly fatal mile record trials on Staten Island, the ominous series of accidents with which the Fall racing season has opened is perhaps no surprise. But it is human nature to require the repetition of an unwelcome lesson before it is taken to heart; and bitter experience has been needed to teach the public, and even many racing men, that the transfer of speed competitions from the highway to the track does not of itself diminish their danger. The spectators are, or may be, out of harm's way, but the personal hazard of the contestants is more, not less, than on a known highway, on account of the fearful strain of the turns on steering gears and tires. Track management, spectators, and contestants alike have much to learn in this regard before the accident list is brought down to an irreducible minimum involving the contestants alone, who know their own risk.

One thing is clear. Some way must be found, by warnings or force, to keep the public away from the track, and in the grandstand where it belongs. It is not an easy problem, certainly, unless the public will learn by experience, for the tracks are built for horse racing, and have very few safeguards. The center of attraction,

however, is usually the paddock; and if irresponsible persons can be barred from this, the temptation to wander thence to the trackside will be removed. So far as tire bursts go, the track straights are not particularly dangerous, but a failure of the steering gear, or the loss of a wheel, would be as serious there as anywhere, and the side of the track in front of the grandstand should at any cost be kept clear.

As very many track accidents are primarily due to tire failures, it should be sufficiently plain that any contestant who slights this most vital part of his equipment assumes a heavy responsibility. If the tires which burst in the races referred to were the best obtainable, and new, the inference can hardly be avoided that either a restriction in speed or a new kind of tire is the next thing needed.

## WORK FOR THE A. A. A.

With the inevitable tendency of track racing to produce a breed of skeleton racers having only enough metal in them to carry the motor and stand the strain of the turns, and the heightened risk of accident that this implies, it looks as if the American Automobile Association may be forced into a very aggressive supervision of this sport if it is not to become too dangerous for sensible men to engage in. Failure of an entrant to start is unsportsmanlike and calls for investigation; but there are worse things, and one of them is starting with a car which is not in the safest condition its owner and driver can put it in. Another is giving a car to an inexperienced driver, to the peril of his own and his fellows' lives.

The referee has the right to debar from starting any car which he considers unsafe, unsuitable, or of improper construction, and he should exercise this right without hesitation. If the penalty of suspension for foul driving is not sufficient to keep unskilled drivers off the track, other penalties will have to be added. Public opinion will sustain the A. A. A. in any step it deems necessary to prevent all accidents which in the light of present knowledge are seen to be preventable.

## PREVENTION OF ROAD ACCIDENTS.

The press reports of automobile accidents that have occurred on the road with increasing frequency this season are exasperatingly indefinite as to the precise primary cause in each case. This is doubtless due in part to the ignorance of the usual daily newspaper correspondent and reporter regarding things mechanical, especially as they pertain to motor vehicles, and also in part to the unwillingness of the driver of the machine to confess his own inexperience and carelessness.

Reading between the lines of such reports, however, it seems apparent that inexperience, nervousness and recklessness are primarily responsible for most of the

accidents. One of the most common forms of road disaster is the running backward down hill of a car filled with people, usually ending in the overturning of the machine in a ditch and the injury of one or more of the occupants.

Now, manufacturers long ago recognized the importance of providing a sufficient number of strong brakes, effective in both directions, and the heavy touring cars have not only the usual brake on the transmission, but a pair of powerful band brakes operating on drums directly attached to the drive-wheels. These, when kept in proper adjustment and condition, will hold the car, fully loaded, on any grade that it can climb. It appears evident, then, that the only reason for a machine running backward down a hill and getting beyond the control of the operator, is that the first principle in the use of any piece of machinery has been neglected—that is, the careful examination of all operative parts to see that they are in proper working condition and properly adjusted. The brakes require occasional adjustment to compensate for wear, and should be given particular attention before starting for a ride over roads that are known to be hilly.

Other accidents can be traced to the not uncommon over-confidence of inexperienced persons, who, before they have run a car long enough to retain their self-possession in emergencies, drive through crowded thoroughfares and even attempt to run at high speed. In such circumstances, when confronted by danger, the operator becomes confused as to the functions of the various levers and pedals and moves the wrong one.

No amount of care in the construction of a vehicle and its equipment with automatic safety devices can wholly prevent accidents from such a cause; all the manufacturer can do is to send an expert operator with the car when delivered to thoroughly instruct the purchaser in its use, and to give the buyer a complete booklet of instructions for that particular machine. It has been the custom for some time with the leading manufacturers to do this, so that it only remains to urge the universal adoption of the plan.

Perhaps the one good feature of the licensing laws now in force in a number of States will be the reduction of road and street accidents, through their requirement of competency to operate an automobile on the part of an applicant for registration.

## A MODERN BUCEPHALUS.

The Toledo *Blade* is authority for a story which, if it emanated from almost any other source, would certainly require an affidavit, but which, coming from a town that has chosen "Golden Rule" Jones as its mayor four times by increasing majorities, is entitled to respectful consideration. According to the *Blade*, Toledo boasts a young woman and a horse, of which it is difficult to say which is the more to be ad-

mired. The horse was, on one occasion in his distant youth, badly scared by an automobile. In that he was not especially peculiar, but whereas other horses, on the passing of their first alarm, have been content merely to ignore the new means of transit, this aged irreconcilable, when he now sees an auto, takes the bit in his teeth and makes after it, in spite of whip and rein, with snortings and revengeful fury. As the motorists naturally do not wait for him to overtake them, the placid streets of Toledo are enlivened for a mile or two by a very interesting stern chase, in which honors are apt to be about even until the limitations of a finite pair of lungs make themselves felt.

As for the young woman—well, she drives the horse, and holds on to the seat when he takes the warpath. According to her statement, that is about twice a week. How many buggies have been smashed, and how many hopeful swains given a chance to risk their lives for a lady's smile, we are not informed.

But the point we wish to make is that such unexampled courage should not go unhonored. Heroes have been immortalized in deathless bronze for less. The suggestions of the *Blade* that the horse be given to a policeman, to pursue speedy motorists withal, is both inexpert and inadequate. To be sure, the pursued would have the sport of their lives, but where would the heroine come in? We submit that the proper thing would be a combination variety of statue, equestrian *plus* auto, the buggy with its fair and fearless occupant flying behind, and the horse in the act of trying to bite the corner of the tonneau.

That automobiles are not always and everywhere detested is exemplified by the fact that people of Akron and Canton, Ohio, made desperate though unsuccessful efforts to deflect the route of the Endurance Run from Youngstown, so as have it pass through their own towns. Though perhaps not wholly altruistic, the spirit thus shown was commendable.

A correspondent of the New York *Tribune* who lives in Waukesha, Wis., and is probably too guileless to tell a lie, telegraphs that paper that Waukesha has been visited by a plague of toads. So numerous were they, according to this veracious chronicler, that a local physician's automobile had its control lever jammed by the saltatory batrachians and had to be driven into a convenient river before it would stop. Another auto caught a crab—we mean a toad—in its gears or chain and stopped so suddenly that the driver was pitched headlong out. He would have been killed, of course, but that the cause of his mishap was also his salvation, for his fall was broken by a cushion of toads.

## INTERESTING FEATURES OF REGISTRATION.

### BOSTONIANS FOOL THEMSELVES.

**The Desire for Small Number Plates Brings Some of Them Conspicuous Numerals—Non-Residents Secure Licenses—Superstition over Number 13.**

*Special Correspondence.*

BOSTON, Sept. 14.—The total number of registration certificates taken out in Massachusetts under the new registration law is, to date, about 2,965, while the licenses to operate number about 3,540. A number of Rhode Island physicians and touring enthusiasts were among the first to come in from outside the State of Massachusetts seeking registration here, their reason being that from their homes just across the border they are accustomed to drive into Massachusetts as frequently as they start off in the opposite direction. After these, came several men from just across the border in Connecticut, from valley towns south of Springfield; and more recently several certificates of registration were asked for by New Hampshire residents. Some of these people live just across the line, and drive into Massachusetts every day to business. In this way, license and registration fees for the Bay State are being swelled considerably by the motorists from adjoining States who are allowed to run with little or no restriction of the same kind at home.

When local automobilists found that if they drew low registration numbers they could carry shorter number plates, on their cars, there was great rivalry to get in applications early enough to secure No. 1, and other low numbers. The luckiest applicant was Frederick Tudor, a well-known member of the Massachusetts Automobile Club, who secured the initial number for his Winton turing car. At the same time, he drew the number "99" for his small electric runabout, which number was also low enough to go on one of the small plates. But, after the first flush of victory was over, it became apparent to those interested in the contest for low numbers that Mr. Tudor, while securing the most desirable numbers so far as the size of plate required was concerned, had secured designations which make his cars more noticeable than any others on the whole Massachusetts list. A "1" is easy to distinguish in a hurry and easy to remember. Few policemen could fail to pick out a car so marked. Number "99" is almost as bad, for "99" has been a notable figure ever since the days of the "Ninety-nine-cent store."

Arthur P. Underhill, the jovial representative of the Knox cars, and George G. Reed, his partner, waited as long as possible, hoping to obtain a number so large as to be confusing to the eye and mind. But when they applied for a garage number,

they received in a day or two a certificate and set of number plates bearing the simple and easily-discernible mark "019." They had forgotten that dealers' demonstration cars have to be distinguished by a cipher preceding the other numerals. This places the dealers in a class by themselves, and there are not enough of them in and around Boston to let anyone have a very high number.

The Highway Commissioners' clerks had a hard time trying to assign the figure "13". They gave it to several in turn, but each time it came back with the request for some other number. The superstition regarding it was too strong with almost everybody. Finally, Sterling Elliott, of League of American Wheelmen fame, rang up the secretary of the commission and asked if he could have No. "1." He was too late by several days, but he was told that No. "13" was still available, and he promptly agreed to take it. Mr. Elliott put it on his steamer at once, using thirteen screws in the process and doing the work on a Friday. He hasn't had any bad luck yet, but his machine is pointed out oftener by people who are superstitious than any other car yet registered.

### American Cars in British Trials.

The complete entry list for the fifth annual reliability trials of the Automobile Club of Great Britain and Ireland, to be held at London during the ten days beginning September 18, includes 137 competing vehicles, separated into classes according to selling price. A special class is provided for tandems and quadricycles and other small two-seated vehicles weighing more than 170 pounds and selling for \$800 or less.

There are seven classes for automobiles. The number of vehicles entered in each, together with the number and type of the competing cars of American manufacture, is as follows:

Class A—Cars selling at \$1,000 or less. Total number 20; American cars 4; Stanley (steam, 5 1-2-horsepower), Cadillac (gasoline, 6 1-2-horsepower), two Oldsmobiles (gasoline, 5-horsepower).

Class B—Cars selling at from \$1,000 to \$1,500. Total number 17; no American cars entered.

Class C—Cars selling at from \$1,500 to \$2,000. Total number 24; no American cars entered.

Class D—Cars selling at from \$2,000 to \$2,750. Total number 29; one American car; White (steam, 10-horsepower).

Class E—Cars selling at from \$2,750 to \$3,500. Total number 25; American cars 2; Winton (gasoline, 20-horsepower); White (steam, 10-horsepower).

Class F—Cars selling at from \$3,500 to \$4,500. Total number 16; no American cars entered.

Class G—Cars selling for more than \$4,500. Total number 6; no American cars entered.

### CAME TO THE TAPE EVERY TIME DESPITE DAMAGES.

There is a growing number of advocates of the idea that some drastic rules should be formulated to force all who enter cars for racing events to start in them. As matters now stand, owners and makers can secure the temporary advertising of having their names appear as entrants in several events without having the least idea of competing. It is realized that the public will soon tire of attending race meets at which only half the entrants come to to the tape. Some penalty is needed to insure the keeping of faith with promoters and the public.

This idea had its echo at the Cleveland banquet following the races of September 4 and 5, when Referee Pardington called attention to the sportsmanlike action of J. R. Chisholm with his Decauville, driven by Henri Paige. Just before the races something happened to the water pump so that the circulation was stopped. This resulted in a natural overheating of the cylinders, with the consequence that all four water jackets were cracked across their tops, just to the left of their centers on the exhaust valve side. No one could have criticised the owner had he withdrawn his car under the present loose methods, and even under the suggested change in the rules their would have been a prime cause for withdrawal. But the Decauville car and its driver, as one of the competitors in the Paris-Madrid race, had been advertised to appear at Cleveland and Detroit, and they came to the tape and did their best under handicap conditions.

Bad luck followed the car to Detroit, where it smashed into the fence. Well along in the ten-mile race Paige noticed that his right front tire was punctured. Thinking he had but one mile more to go he kept on. Then the shoe came off, the rim plowed up the track and the car swerved into the fence as a consequence, bending the front axle. The car was immediately shipped to New York, where work was at once started on the axle and new cylinders in an effort to get the machine ready for the Providence races.

### Kansas City Race Meet October 8.

KANSAS CITY, Mo., Sept. 12.—The date for the Kansas City Automobile Club's races has been fixed at October 8, during the week of the annual fall festivities which almost every Western city has. The meet will be held on the grounds of the Kansas City Driving Club. The program includes the following events: a free-for-all five-mile race with a time limit of less than ten minutes; a pursuit race, with a time limit of ten minutes; a two-mile trial for machines under 1,000 pounds; a three-mile speed trial for those between 1,000 and 2,000 pounds, and a three-mile race for those over 2,000 pounds.

Another feature is a special race, no de-

tails of which are yet known. For this event it is still hoped to have one or more of such cracks as Oldfield, Kaiser, Cooper or Fisher. Several Winton touring cars will be seen in the races. The track is only a half-mile oval.

F. M. Keeton, of Chicago, has notified the Automobile Club that he will attend the meet with several machines. The manufacturers of the Toledo, the Oldsmobile, the Searchmont and the Haynes-Apperson have also expressed their desire to enter racing machines for exhibition purposes. An autocar, owned here, will be one of the local entries.

A feature of the meet will be A. W. Armour, grandson of the late P. D. Armour, who is driving a 9-horsepower Renault, with which he has made high speed on French roads. The machine, which lately has been in Chicago, has been shipped to Kansas City within the past few days.

As the entry list is not yet complete, although it already comprises a number of local motorists in addition to Mr. Armour, a most successful meet is anticipated.

### TOUR OF BACKWOODS OF MAINE TO BE REPEATED.

*Special Correspondence.*

BOSTON, Sept. 14.—James B. Dill, the New York banker who drove through Boston early in July, bound for the Rangeley Lakes and backwoods of Maine, in his big automobile touring car, stopped here on his way homeward last Sunday. His daughters, May and Helen, had the car out for a run over some of the nearby stretches of good road in the Brookline and Newton districts, before starting homeward by way of Lenox, through the Berkshire Hills to New York.

Mr. Dill said that he was greatly pleased with the way in which his machine had showed itself able to negotiate the rough trails of the backwoods country. The chief trouble had been that its tanks and machinery hung so low as to come in contact in some places with the rocks and humps of the rough roads, or to give trouble in getting over obstructions. He plans already to have built a new car this winter in which he will make the same trip again next summer. He thinks he can adapt the new car pretty well to the back-country conditions by having the machinery and tanks placed higher. He will also try to secure greater independence of gasoline supply centers by having the tanks increased in capacity, although he will probably still be obliged to provide his own fuel by having it shipped into the district on his own order.

### Illuminated Parade in Paterson.

The Business Men's Association of Paterson, N. J., promoted and carried out a successful carnival during the week ended September 13, the last public feature of which was a parade of gayly-decorated

and illuminated automobiles. It was under the command of Frank W. Stockbridge, and there were many handsome cars in line. During the parade the touring car belonging to Edward Fifield caught fire from a red-fire torch and Miss Jane Buckley, one of the occupants, narrowly escaped being badly burned. The car, which was a mass of ribbons, paper and bunting, was ablaze in an instant. The occupants were rescued and the fire extinguished by spectators.

### ATHLETIC CLUB AUTOMOBILE RUN TO TRAVERS' ISLAND.

Starting from the city clubhouse in Central Park South, the automobile faction of the New York Athletic Club held its first fall automobile run on Saturday, September 12, to the Travers' Island clubhouse. The start was made shortly after 11 o'clock, and the route was through Central Park, to Seventh Avenue, to 189th Street and Pelham Park to the island. A stop was made at the Woodmansten Inn en route and the Country Club was reached at a few minutes after 1 o'clock.

Fifteen cars were in line at the start, but all along the line additional cars dropped into the procession, until the number aggregated fifty-one at the finishing point. Practically every type of pleasure automobile was represented in the cavalcade. The pace was moderate, and there were no breakdowns or extraordinary incidents of any kind. The presence of nearly 100 women in the automobiles bespoke the popularity of the departure from "scorching" to the island. Other fall runs will be outlined and the automobile section of the club promises to become prominent in New York as a touring club.

### Kiser's Accident at Zanesville.

At a series of automobile track races which formed one of the attractions of the Zanesville, O., county fair on September 9, the powerful Mohawk racing car driven by Earl Kiser, of Dayton, left the track and plunged through the fence, striking and fatally injuring John Gooden, a night watchman, and seriously injuring a number of other spectators. Kiser's ankle was broken but otherwise he escaped injury. The accident was caused by the bursting of a front tire, after which the operator lost control of the machine. The car was running at top speed and had just turned into the backstretch when it left the track.

### Boston Machines for Endurance Run.

*Special Correspondence.*

BOSTON, Sept. 14.—It looks now as if there would be a dozen or more motor cars from Boston entered in the N. A. A. M. endurance run from New York to Pittsburg and return next month. Boston tradesmen are taking much interest in the contest and think there is a chance for them to make a good showing.

### The "Gray Wolf" Racer.

The new Packard racer, called the "Gray Wolf," is the first car built purely for speed purposes by the Packard Motor Car Co. It is equipped with one of the maker's standard four-cylinder 25-horsepower model K engines located under the forward hood. The machine has sliding gear transmission giving two speeds forward and reverse. When running on the high speed all gears are disengaged and drive is direct from the motor to the differential. The two forward speeds give 30 and 75 miles per hour at an engine speed of 1,000 revolutions per minute. The machine is not in any sense a freak, constructed for speed purposes only, but contains all the elements of a road car. The spring suspension combines the same transverse front spring used successfully in the model F road car and gives to the Gray Wolf the same three-point bearing and the flexibility of the running gear necessary for traversing uneven surfaces at high speed without disturbing the alignment of the mechanism.

In all of its essential features, such as ignition, carbureter, water circulating system, steering gear, brakes, etc., the racer is just like one of the standard cars, differing only in its shape and the elimination of all surplus weight for racing purposes.

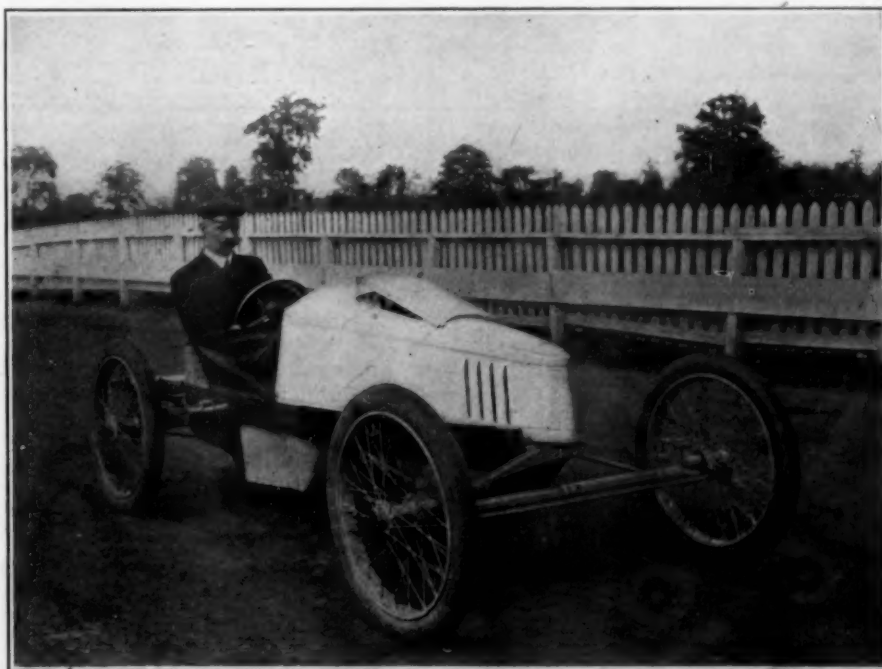
The car tips the scales, when filled with gasoline, water and oil, at slightly less than 1,400 pounds.

After the accident in Cleveland on September 3, when Mr. Schmidt, the designer

and radiator in the interval between the Cleveland and Detroit races, and Harry Cunningham drove the car at the latter meet in place of Mr. Schmidt, who had two ribs broken.

gate in the outside fence and brought it to a stand in safety, several hundred feet from the scene of the accident.

By replacing the two damaged 34-inch wheels by a pair of bare 32-inch wheels



PACKARD 25-H.P. RACING CAR, CHARLES SCHMIDT AT THE WHEEL.

The first day at Detroit, in the hands of a new man, it won second place in the manufacturers' challenge cup race, being beaten only by Cooper in the Ford-Cooper racer

which were at the track, the car was able to enter the two ten-mile events, though the smaller driving wheels considerably reduced its speed. Despite this handicap it won both of the ten-mile events.



THE 1904 GROUT STEAM SURREY WITH CANOPY TOP.

at the factory, attempted to make a sudden turn to avoid a collision with a touring car while going at high speed and turned completely around on the track, smashing into and tearing away about 150 feet of the fence, repairs were made to the hood

and beating Barney Oldfield on a Winton car. The second day the car had the misfortune to strike the inside fence, demolishing the rear wheel. With marvelous presence of mind, Cunningham steered the car on three wheels through a

### The Grout 1904 Steam Surrey.

The growing tendency among builders of steam vehicles to follow the lines of gasoline car design is indicated by reference to the accompanying illustration of a 1904 Grout steam touring car. Were it not for the fact that this vehicle is fitted with a surrey body, instead of the more familiar tonneau, a first glance would not disclose the fact that it is driven by a steam engine of 20-horsepower, instead of by a gasoline motor. The boiler is protected by the metal bonnet forward, and the engine is under the front seat. Kerosene is used for fuel and the air and water pumps are automatic. The differential is incorporated in a cross countershaft, at the ends of which sprockets are fitted, the power being communicated direct to the rear wheels by means of heavy chains. The wood wheels are fitted with solid rubber tires.

It will be observed that the canopy top with which the car is fitted is removable.

It is made of wood and a railing provides a place for luggage above. There is a glass front for the protection of the passengers, and the back is provided with glass panels.

This powerful and evidently comfortable car is the latest product of Grout Brothers, Orange, Mass.

### THREE NATIONS PREPARING EARLY FOR THE GORDON BENNETT.

It is practically assured, although not yet definitely decided, that the Gordon Bennett cup race for 1904, which is to take place in Germany, will be held on a course near the town of Homburg. Should the German Automobile Club, which is to select the course, finally decide on Homburg, the great international contest will undoubtedly attract more attention than ever before, and it is safe to say that it will be the leading automobile event of 1904.

Homburg is one of the great Continental health resorts, and a Mecca for thousands of Europe's most fashionable and exclusive folk, and the season will be at its height in July, when the race is to be held. The whole German nation rejoiced when the Gordon Bennett cup was won for them by Jenatzky on the Irish course last July, and the accompanying illustration offers mute evidence of the esteem in which the coveted trophy is held by the German Automobile Club, where it now rests in a place



THE KAISER AND THE BENNETT CUP.

of honor, under a large portrait of the German Emperor.

#### GERMAN ASPIRANTS FOR THE CUP.

It has been decided that the Daimler company is to have the honor of entering two cars in the great race without being required to participate in the German eliminating trials. There is already considerable activity among other German manufacturers for third place. Among those who are expected to enter cars in the preliminary trials, the following manufacturers have expressed a definite intention to compete: Benz & Company, Mannheim; the Dietrich company, Berlin, and the Adler company, Frankfurt. The Adler car, which is now being constructed for

the trials, is to be fitted with a 90-horsepower motor, but the other competing cars will be driven by motors of not more than 70-horsepower. Another German manufacturer, The New Automobile Company, is building a car for the trials, but it is doubtful if it will be completed in time to participate.

#### WHAT THE FRENCH ARE DOING.

Great activity is being shown in France by manufacturers of racing cars, and interest in next year's race is very keen. The three French contestants will be decided by an open competition which promises to be second in interest only to the final race. If present indications point true, the Panhard and Mors people will not have everything their own way in the eliminating trials, as a number of other aspirants are preparing to come to the front with one or more racing machines. Among these might be mentioned the manufacturers of such well-known cars as the Renault, C. G. V., Darracq and Decauville.

The Automobile Club of Great Britain and Ireland, which only recently issued the code of rules that are to govern the selection of England's three representatives in the International race, has already received word from S. F. Edge, Limited, selling agents for Napier cars, that five vehicles of that make will be on hand to compete in the eliminating trials which are to take place next April. The Wolseley Tool & Motor Car Company, makers of Wolseley cars, and the Star Engineering Company, which manufactures the Star cars, are also expected to have one or more racers in the English trials.

#### American Car's Performance Abroad.

The official results in the Sun-Rising hill contest, held by the Midland Automobile Club, in England, on July 25, have just been published. The only vehicle of American manufacture entered in the contest was a 6 1-2 horsepower Cadillac, entered by the Anglo-American Co., and driven by F. S. Bennett. The rule required that each car should make two stops in ascending the hill, and the restarting was closely observed. In reference to the Cadillac, the judges report as follows:

"1st, came up slowly, started very well, no back motion, no skidding, started very

gently and easily; 2nd, made best start of any so far. Excellent."

The Sun-Rising Hill is a difficult and dangerous course, with gradients of 1 in 9 to 1 in 6.43.

#### Pope Branch Managers Meet.

Managers of several of the branch offices of the Pope Mfg. Co. gathered in Hartford, Conn., recently to examine the company's plant and attend the annual conference. In the evening the visitors went by automobile to Chaffee's Hotel in Middletown, returning at 11 P. M. The managers present at the annual conference of the company were Elliott Mason, of New York City; R. D. Garden, of Philadelphia; W. J. Foss, of Washington; H. H. Rice, of Providence, and W. E. Eldridge, of Boston. Manager E. E. Hinsman, of the Hagerstown, Md., branch of the Pope company, the old Crawford bicycle factory, is authority for a statement to the effect that plans have matured for taking on several new industries, in addition to the manufacture of bicycles, at the Hagerstown plant.

#### A Trade Change in Boston.

##### Special Correspondence.

Boston, Sept. 14.—One of the interesting trade changes of the week in Boston is the business separation of Ralph S. Coburn and his father, A. J. Coburn, of the Columbus Automobile Exchange. The two have been associated for several years, handling the Crestmobile and Elmore machines chiefly. But now young Mr. Coburn has taken one of the stores on the opposite side of Columbus Avenue, at 182, which he has had remodelled as a small salesroom and garage. "Hereafter all the sales business of the Crest Mfg. Co. will be done through this office," he says, "and the demonstrating will all be done here, too. They have had too much of this to do out at the factory lately, and now they are forced to separate the sales and demonstration from the manufacturing end."

Although young Mr. Coburn takes the Crestmobile business for his own special attention, his father, A. J. Coburn, remains at the old place, across the avenue and will continue to handle the Elmore. He has also taken on, in place of the Crestmobile, the Holley, a new light-weight automobile.

#### Dates of Forthcoming American and Foreign Events.

- Sept. 18-26—One Thousand-mile Reliability Trials, England. A.C. of G. B. & I.
- Sept. 19—Race Meet at Providence. Rhode Island Automobile Club.
- Sept. 28-29—Race Meet at Washington Park, Chicago. Chicago Automobile Club.
- Oct. 3—Race Meet at Empire City Track, Yonkers, N. Y.
- Oct. 5-10—French Trials of Passenger and Delivery Vehicles for Town and Country Service.
- Oct. 5—Weighing in for N. A. A. M. Reliability Run to Cleveland and Pittsburg.
- Oct. 6—Start of Reliability Run from New York.
- Oct. 14—Arrival of Cars in Pittsburg.
- Oct. 15—Brake and Hill-Climbing Tests at Schenley Park, in Pittsburg.
- Oct. 16—and following days—Examination of Cars.
- Oct. 16-17—Race Meet at Matinee Park, Pittsburg. Pittsburg Automobile Club.
- Dec. 10-25—Sixth Annual Paris Automobile Exhibition.
- Jan. 16-23—Annual Automobile Exhibition, Madison Square Garden, New York.
- Jan. 25-Feb. 6—Florida East Coast Tournament, Daytona Beach, Fla.

## THE ERIE CANAL CLAIMS SEVERAL AUTOMOBILE VICTIMS.

*Special Correspondence.*

SYRACUSE, Sept. 14.—An intended automobile trip from Syracuse to Buffalo was brought to a sudden termination in the western part of Syracuse early last Sunday morning when a big automobile and the members of a touring party were treated to an involuntary bath in the Erie Canal. The car was a 20-horsepower Panhard, the property of Dr. John Grant Lyman, of New York City, who was driving the machine at the time of the accident. Dr. Lyman's companions were Armand W. Brand and W. T. Rynard, of New York, and A. Dietz, chauffeur.

The party had been making a tour of western New York State, with Buffalo as the objective point, and after arriving in that city it was decided to run back to Syracuse to see the automobile races at

Divers were hired to put ropes on the machine and after considerable effort it was pulled into shallow water and finally hauled out and towed back to Syracuse, the whole proceeding greatly edifying an interested crowd. The car was not seriously damaged despite its sudden plunge, and it was estimated that the necessary repairs could be effected in two or three days.

## A BIG AUTO RACE MEET AT FRANKFORT, GERMANY.

The Frankfort, Germany, Automobile Club held a very successful race meet on a trotting track at Frankfort-on-Main on Sunday, August 30, in the presence of an estimated crowd of 30,000 spectators.

The principal event was a ten-mile race for cars of 60-horsepower or less which was run in three heats: an amateur heat, a professional heat and the final. There were

Opel on an Opel-Darracq in 7:43, and a professional five-mile race, in which A. Ricordi, on a 10-horsepower Benz car, proved the victor in 7:42 3-5.

There was also a five-mile handicap reserved for members of the Frankfort Automobile Club, which was won by F. Opel, who covered the distance in his Opel-Darracq car in 4:50 1-5. Opel was given a handicap of thirteen feet in this contest.

In addition to the races mentioned there were two eight-mile contests for cars of 16-horsepower or less, one restricted to amateurs and the other for professionals. The amateur race was won by Adler, on a 15-horsepower Adler, in 12:53 1-5. The professional race went to W. Joerns, on a 15-horsepower Opel-Darracq, in 11:9 1-5. The professionals were obliged to start their motors after the signal for the start of the race was given, any delay counting against them, but the amateurs were not so restricted.

## NEW REGULATIONS IN EFFECT IN WASHINGTON.

*Special Correspondence.*

WASHINGTON, D. C., Sept. 12.—The new automobile regulations went into effect last Monday, and it was three days later before the first arrest was made for a violation of the regulations. The first person to be arrested was Carl J. Lockwood, the automobile dealer, who fought energetically to have the District Commissioners restrained from putting the regulations into force and getting out an injunction only to be finally defeated. Mr. Lockwood was arrested on a charge of leaving his automobile unlocked and without an attendant. He was required to leave \$50 collateral as security for his appearance for a further hearing. It is expected that Mr. Lockwood will have an array of legal talent behind him in court and a hot fight may be expected.

The arrest of John H. Warland on the charge of operating a motor cycle without a license brought out the fact that motor cycles are included in the provisions of the automobile law.

## Auto Stage Line Up Mt. Washington.

It is proposed in Boston to run an automobile stage line up Mt. Washington next summer, and different Bostonians prominent in the automobile trade say the plan is feasible if the cars are built especially for the hard service that would be required of them. Even a large ten or twelve-passenger break could make the ascent under present conditions, says L. J. Phelps, of Stoneham, Mass., who recently made the eight-mile ascent in a 15-horsepower car in 1:45, and with a few improvements in the road and the proper cars for the service the stage line up the mountain should be a success.

Superintendent Jewell, of the horse stage line, in operation at present, is convinced that the introduction of automobiles would revive interest in travel on the mountain.



DRAGGING J. G. LYMAN'S PANHARD OUT OF THE ERIE CANAL.

the State Fair grounds last Saturday. Early Sunday morning they left Syracuse on the return journey. The West Genesee Street drawbridge over the canal is approached on an up grade, and the New York Central railroad bridge obscures the draw from view. Dr. Lyman did not see that the draw was open until he had reached the top of the grade, and then it was too late to stop the car, which shot off the abutment into the water and sank immediately.

Mr. Brand jumped and landed on the tow-path, but, unable to maintain his balance, rolled into the canal. The other members of the party were good swimmers and easily reached the bank, but Mr. Brand was rescued with difficulty, after which it was found that he had sustained a compound fracture of the left ankle. He was taken to St. Joseph's Hospital, where he will be confined for several weeks.

The task of removing the big Panhard from the bed of the canal was no easy one.

seven entries in the first heat, which was won by Willi Poege, on his 60-horsepower Mercedes-Simplex car, in 12:55 1-5. The professional heat went to Beconnois on his 35-horsepower Opel-Darracq in 13:32 1-5. The final and deciding heat left Poege the victor. He won handily in 12:51.

It is anticipated that this race, which will be made an annual event, will assume the importance of an international affair. Herr Louis Peter, a prominent German tire manufacturer, offered as a special prize a beautiful cup, which is to become the property of the first contestant who wins the race two seasons in succession. Special rules, somewhat similar to the conditions governing the Gordon Bennett races, have been drawn up and will be observed in future contests for Herr Peter's cup.

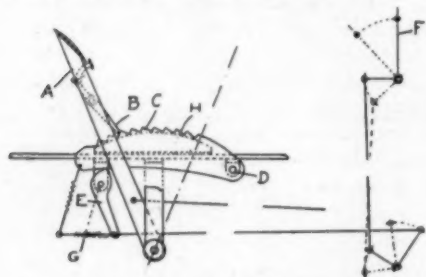
Other events at the Frankfort meet included a three-mile motor cycle race, won by Phieltiens on a 3 1-2 horsepower Antoine in 4:44; an amateur five-mile race for cars up to 10 horsepower, won by F.

## Patents

### Safety Device for Electric Vehicles.

No. 738,100.—H. F. Cuntz, of Hartford, Conn.

A device for preventing the brake from being locked except when the controller is in the "off" position, and for automatically releasing the brake if the controller is shifted to an active position. The drawing shows the brake locked and the controller



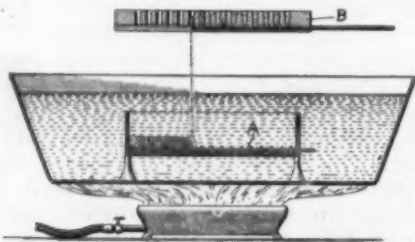
CUNTZ ELECTRIC VEHICLE CONTROL.

in the "off" position. *A* is the brake pedal and *B* the lock which works over the notched segment *C*, of which one end is pivoted at *D* and the other end is supported by the heel of the cam lever *E*. As shown diagrammatically, the controller lever *F* is so connected to *E* as to elevate *C* when in the "off" position, allowing the brake to be locked. When running, *F* is thrown forward as shown in dotted lines, *E* is tilted by virtue of spring *G*, and *C* drops till the pawl end of *B* rides on the smooth guide *H*, shown dotted.

### Manufacture of Storage Batteries.

Nos. 738,313 and 738,314.—O. P. Fritchle, of Denver, Colo.

The inventor claims to have discovered that finely divided lead, such as may be produced by pouring molten lead against an air blast, obtains a peculiar cohesive property, as if in a molten state, when immersed in a hot dilute solution of hydrochloric acid, and that in such a condition it may be welded by moderate pressure into



FRITCHLE BATTERY MAKING PROCESS.

a rigid but very porous mass. These two patents relate to the process of manufacture under this principle, which consists in immersing the lead grid *A* in a hot bath as shown, and letting the granulated lead fall on it by withdrawing a slide from the bottom of a perforated holder *B*. Pressure is preferably applied to the grid while it is

still in the solution. The bath is of about 5 per cent. strength.

### Storage Battery.

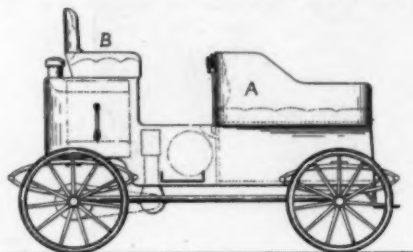
No. 738,110.—E. W. Jungner, of Norrköping, Sweden.

This battery, which is very similar in principle to the Edison battery, is designed to avoid the objection to the lead cell, that its electrolyte plays an active part in the reactions of charge and discharge, and therefore changes in character and density during both processes. As in the Edison cell, the electrolyte of the Jungner battery is an alkaline solution, such as potassic hydrate (caustic potash, KOH), and it acts as an electrical and molecular carrier only, being chemically unchanged by the reactions. For this reason a very small amount of electrolyte is sufficient. The principle of the reactions is described as follows in the specifications;

"If a solution of potassic hydrate is electrolyzed between two metal sheets indifferent in the same—for example, nickel—it is primarily decomposed thus:

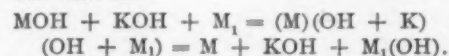


"In order that the electrolyte at the passage of the current shall remain unchanged, there should be present at the cathode an element capable of giving up hydroxyl (OH) under the influence of the



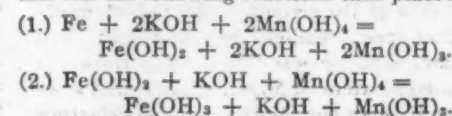
ROGERS TONNEAU-FRONT BODY.

current, such as a suitable metal hydrate, and at the anode an element capable of taking up hydroxyl under the influence of the current, such as a suitable metal in finely-divided condition. The reaction will then be:



Here *M* and *M*<sub>1</sub> signify metal radicals of different kinds. In order that the electrolyte shall remain unchanged, it is evidently also required that as well the metals *M* and *M*<sub>1</sub> themselves as their hydrates here in question shall be substantially chemically insoluble in alkaline solution.

"In practice I use as active masses, for example, hydrates of iron and manganese mixed with graphite. On discharge of this cell the following reactions take place:



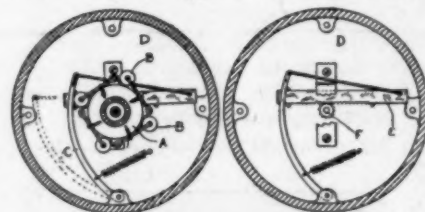
The reaction 1 (which of course takes place only if the charging has been carried far enough to produce metallic iron) gives a

voltage of 0.8 volt, and the reaction 2 a voltage of 0.6 volt. On charging, the reactions are reversed."

### Speed Indicator.

No. 738,683.—E. J. Hodgson, of Minneapolis.

This is the device illustrated on page 25, September 5. Drum *A*, carrying centrifugal weights *B*, is rotated by suitable gearing from the wheels. The weights take the form of rollers, and as they fly out under the influence of centrifugal force they strike arm *C*, pushing it more or less to the left, according to the speed. The drum *D* has two opposite dials, and arm *C*



HODGSON SPEED INDICATOR.

actuates two racks *E*, one just back of each dial, and these turn the index pointers through pinions *F* on strike shafts.

### Motor Vehicle.

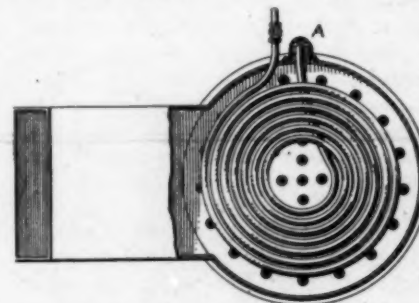
No. 738,241.—W. S. Rogers, of Keene, N. H.

A vehicle in which the passengers are carried in a forward compartment *A*, whose sides overhang the wheels, and having seats at the sides and rear. The operator occupies seat *B*, and the machinery and tanks may be disposed as shown.

### Gasoline Vaporizing Coil.

No. 737,879.—F. E. and F. O. Stanley, of Newton, Mass.

An arrangement designed to avoid the risk of carbonizing or failure to vaporize the gasoline for a steam carriage burner, when the vehicle is left standing with fire reduced, and also the risk of getting water into the fuel pipe in case of a leak, when



STANLEY FUEL VAPORIZING COIL.

the vaporizing tubes are led through the boiler. To this end the vaporizing coil is put above the boiler in the path of the burnt gases as shown. The inner end of the coil is led down by the outside of the boiler at *A* to the burner.